

Health Education for Teachers

A CRITICAL STUDY OF THE PRE-SERVICE
PREPARATION OF CLASSROOM TEACHERS FOR THE
SCHOOL HEALTH PROGRAM

BY
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CHAPTER I

NATURE AND NEED OF THE STUDY

ONE of the most vital and vexing problems in the field of teacher training today is that of the professional preparation of teachers for their work in the school health program. The investigation here reported attempts to study critically one phase of this larger problem, namely, the present programs for the pre-service preparation of classroom teachers for the school health responsibilities which will confront them.

Such a study is both timely and important. Recent investigations point to a new interest in the whole problem of teacher training.¹ Today the entire field of professional education of teachers is under survey and critical analysis.² The present research provides an opportunity for an initial detailed and intensive study of a single phase of the major problem.

But the real import of the topic under investigation derives from the significance attached to child health in modern education. Educators have set up health, at least in theory, as the first objective of public school education.³ And, if the influence of the teacher is limited by her professional preparation, then the question of the training of the teacher for her duties in achieving this first educational objective becomes challenging from the point of view of its implications for the children with whose education she will be charged.

IMPORTANCE OF THE CLASSROOM TEACHER IN THE SCHOOL HEALTH PROGRAM

There is a general consensus among health education experts that it is the classroom teacher, and not the health specialist, who must carry the burden of responsibility for the health activities of the

¹Cf. Charters, W. W. and Waples, D., *Commonwealth Teacher Training Study*. University of Chicago Press, 1929.

²United States Department of the Interior, Office of Education, *The National Survey of the Education of Teachers*. To be published.

³*Cardinal Principles of Secondary Education*. National Education Association, 1918.

schoolroom.⁴ The classroom health activities and their concomitant teacher responsibilities have steadily grown in number and complexity with the development of the schools. In the earliest period of American education, health was neither a school subject nor an educational objective. The teacher concerned herself with instruction for literacy only.⁵ Even in the growing days of the common school system (1834–1850) there was no evidence that health instruction, usually the first health activity to receive school recognition, was a part of the school curriculum. And the teacher was not called upon to assume any responsibility for the health status of her pupils.⁶

GROWTH OF THE TEACHER'S SCHOOL HEALTH RESPONSIBILITIES

Through the agitation of Horace Mann (1843–1850) for the study of the principles of physiology, then called “the science of health,” in the elementary school, the movement for the classroom teacher as a health educator received impetus.⁷ In 1850 with the passage of a state law in Massachusetts “physiology and hygiene” became a compulsory study in all the public schools of that commonwealth.⁸ Ever since that time health instruction, under one name or another—physiology, anatomy, scientific temperance instruction, hygiene, health education—has been a recognized activity in the elementary school curriculum.⁹ Often the recognition accorded it was meager

⁴ Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, *Health Education*, p. 240. 1930.

American Child Health Association, *Report of the International Health Education Conference*, pp. 36, 55, and 56–57. 1923.

American Child Health Association, *School Health Programs from Many Lands*, pp. 13, 28, 97. 1927.

Department of Superintendence, National Education Association, *Fourth Yearbook*, p. 226. 1926.

White House Conference on Child Health and Protection, *Report of the Sub-Committee on Administration*, p. 46. (Mimeographed Edition.)

White House Conference on Child Health and Protection, *Report of the Sub-Committee on Elementary Schools*, p. 71. (Mimeographed Edition.)

⁵ Martin, George, *The Evolution of the Massachusetts Public School System*, p. 99. D. Appleton and Co., 1894.

⁶ Barnard, Henry, “Second Annual Report of the Board of Commissioners of Common Schools.” *Common School Journal*, Vol. 1–2, p. 207, 1840; Vol. 3–4, p. 250, 1841.

Mann, Horace, “Sixth Annual Report of the Secretary of the Board of Education of Massachusetts.” *Common School Journal*, Vol. 7–8, p. 227, 1843.

⁷ Mann, Horace, *ibid.*, pp. 57–160.

Original letter written by Horace Mann to Dr. E. Bartlett, August 9, 1842. Filed in the library of Dr. Thomas D. Wood, Teachers College, Columbia University.

⁸ Hartwell, E. M., in *Proceedings, Seventh Annual Meeting of the American Physical Education Association*, p. 18. 1892.

⁹ Bell, A. N., *Circulars of Information*, p. 41. Washington, D. C., United States Bureau of Education, 1875.

and the results accruing from its study unsatisfactory.¹⁰ Yet, no subject has been more widely prescribed, nor has any received more specific legislation. As Flanders says, "It is our nearest approach to a national subject of instruction."¹¹ After weathering both the neglect of educators engrossed in the so-called school fundamentals, and the over-emphasis of well-intentioned, but misguided, enthusiasts outside the school¹² and of improperly trained enthusiasts within, health instruction has emerged as a school essential, the work of the classroom teacher.¹³

Hard upon the acquisition of health instruction as her responsibility in 1850, came the call for the classroom teacher to direct the classroom program of physical activity. A ruling of the Boston School Committee in 1853 declared that "every scholar should have daily some kind of physical or gymnastic exercise."¹⁴ To her health instruction, the teacher added physical training, then considered a part of school hygiene.¹⁵

With the introduction of medical inspection into the schools in the last decade of the nineteenth century, new interest was centered on the child's physical status. While most of the physical tests were made by the physician, in some places the teacher was called upon to give those for determining status of vision and hearing. Vermont in 1905 was the first state to require that these tests be given by

United States Bureau of Education, *Report of the Commissioner of Education*, p. 175. Washington, D. C., 1887-88.

Martin, George, *Fifty-fifth Annual Report of the Board of Education of Massachusetts*, p. 325. Boston, 1891.

Cabot, Richard, "The Teaching of Hygiene." *American Physical Education Review*, Vol. XIV, pp. 352-58, June 1909.

Wood, Thomas D., "Health and Education." *Ninth Yearbook, National Society for the Study of Education*, Part I. Public School Publishing Co., 1910.

Snedden, David, "The Problem of Health Supervision in the Schools of Massachusetts." *Proceedings of the American School Hygiene Association*, p. 18, 1912.

Flanders, J. K., *Legislative Control of the Elementary School Curriculum*. Bureau of Publications, Teachers College, Columbia University, 1925.

¹⁰ Cabot, Richard, *loc. cit.*

¹¹ Flanders, J. K., *op. cit.*, p. 68.

¹² Hunt, Mary H., *A History of the First Decade of the Department of Scientific Instruction in Schools and Colleges of the Women's Christian Temperance Union*. 2nd Edition. Washington, 1891.

¹³ See footnote 4, page 2.

¹⁴ United States Bureau of Education, *Report of the Commissioner of Education*, p. 514. Washington, D. C., Government Printing Office, 1891-1892.

¹⁵ Mann, Horace, "Sixth Annual Report of the Secretary of the Board of Education of Massachusetts." *Common School Journal*, 1843.

United States Bureau of Education, *Report of the Commissioner of Education*, p. clx. Washington, D. C., Government Printing Office, 1875.

United States Bureau of Education, "City School Systems in the United States," *Circulars of Information*, p. 61. Washington, D. C., Government Printing Office, 1885.

teachers.¹⁶ The following year, Massachusetts made teacher inspection on these two points compulsory.¹⁷

But, even previous to her work in this testing program, the classroom teacher was recognized as a valuable ally of the medical inspector in the program for the control of communicable disease. As early as 1894, by legal enactment, the teachers in the public schools of Michigan were required to teach

the principal modes by which each of the dangerous communicable diseases is spread, and the best methods for the restriction and prevention of each such disease.¹⁸

Later, the teacher became, in some places, the first line of defense in the prevention of the spread of contagion. For example, Boston in 1898 required teachers to select "ailing" children and refer them to the medical examiner.¹⁹ By 1906 the states of Massachusetts and New Jersey, and some twenty-four cities throughout the country, had adopted the method of having the physician examine only those children referred by the teacher because of suspicious symptoms.²⁰

From these initial attempts to separate the children with "signs and symptoms" from children in normal health, the movement toward morning health inspections, daily health reviews, and general health inspections by teachers has grown. Gradually, more and more of this type of responsibility has been delegated to the classroom teacher. And today, in an increasing number of places we find the teacher giving her pupils an annual inspection to detect deviations from normal in the condition of throat, nose, teeth, skin, color, thyroid gland, cervical glands, posture, etc.²¹ In this plan the physician examines only such children as are referred to him by the teacher. Health experts have come to regard these inspection activities, although apart from her primary work of instruction, as

¹⁶ American School Hygiene Association, *Report of the Third Congress*, p. 230, 1905.

¹⁷ American School Hygiene Association, *Report of the Fifth Congress*, p. 16, 1907.

¹⁸ Fall, Delos, "School Diseases and Medical Inspection." *Addresses and Proceedings of the National Education Association*, pp. 534-36, 1898.

¹⁹ Arnold, H. D., "Medical Inspection of the Schools of Boston." *Report of the Commissioner of Education*, Vol. II, p. 1494. Washington, D. C., 1897-1898.

²⁰ National Education Association, *Addresses and Proceedings*, p. 237. Washington, D. C., 1901.

National Education Association, *Addresses and Proceedings*, p. 203. Washington, D. C., 1906.

²¹ White House Conference on Child Health and Protection. *The School Health Program*, p. 84. The Century Co., 1932.

Brydon, Mary, In *Report of the International Health Education Conference*, San Francisco, pp. 53-55. American Child Health Association, 1923.

Gudakunst, Don W., in *School Health Progress, Sayville Health Conference*, pp. 177-79. American Child Health Association, 1929.

American Child Health Association, *A Health Survey of 86 Cities*, p. 155. 1925.

one of the classroom teacher's most valuable contributions to the school health program.²² A group of physicians, consulted by a sub-committee of the White House Conference on Child Health and Protection with respect to the content of mandatory medical supervision laws, agreed that the teacher's preparation for her work of inspection, as cited above, should be required by law, and that a statement to that effect should be included in the content of these laws they were considering.²³

The development of the modern health education movement, about 1918, made the classroom teacher play a still more dynamic rôle in school health work. The newer interpretation of health in its social and mental, as well as physical aspects, and the concomitant attention to racial health, mental hygiene, and the hygiene of instruction in the schools, have brought about a demand for attention to the health of "the whole child."²⁴ This has made, and is making, new demands upon the teacher's knowledge and appreciation of health subject matter, as well as upon her ability to make this knowledge function in classroom situations.²⁵ Furthermore, the increased interest in school health work following the war brought into the schools various health specialists with whom the teacher was and is expected to cooperate, and whose work the teacher is often expected to follow up.

In his study of the duties performed by teachers, Charters listed no less than one hundred and six individual school health duties performed by teachers.²⁶ The Reports of the White House Conference on Child Health and Protection, Committee on The School Child, cite numerous school health activities of the classroom teacher, and various health responsibilities which she must carry. The following, from the report of the sub-committee on administration, are typical of what a national group consider the classroom teacher's work.²⁷

²² Rogers, J. F., *What Every Teacher Should Know about the Physical Condition of Her Pupils*, pp. iii, 2. Washington, D. C., Government Printing Office, 1924.

Buck, Carl, in *Public Health Bulletin*, p. 727. Lansing, Mich., September, 1922.

²³ White House Conference on Child Health and Protection, *Report of the Sub-Committee on Legislation*. Summarized in *The School Health Program* under "Legislation." See p. 388.

²⁴ White House Conference on Child Health and Protection, *The School Health Program*, pp. 1, 18, 33. The Century Co., 1932.

²⁵ White House Conference on Child Health and Protection, *Report of Sub-Committee on Administration*, pp. 40-45. The Century Co., 1932. (Mimeographed Edition.)

²⁶ Charters W. W. and Waples, D. *Commonwealth Teacher Training Study*, pp. 393-412 and 499-535. University of Chicago Press, 1929.

²⁷ White House Conference on Child Health and Protection, *Report of Sub-Committee on Administration*, pp. 32-47. The Century Co., 1932.

See also Sundwall, John, *Transactions, Fifth Annual Meeting*, p. 254. American Child Health Association, 1928.

There should be a daily health inspection of all pupils in order to detect certain significant and approved signs of health disturbance, or the indications of any deviation from normal health. This inspection should be carried on by the classroom or homeroom teacher during the first few minutes of the daily school session. In addition the teacher should be alert to notice any signs of importance which may appear during the school day.

In the rural school the responsibility for exclusion must rest with the teacher.

The immunization program should receive the support of every teacher.

The instruction should be left directly in the hands of the classroom teacher.

Teachers' methods must be greatly modified to avoid the inducement of harmful psychoses.

Life in the schoolroom should be organized to avoid fatigue and poor working conditions.

The personnel which operates the school must be educated in the field of sanitation and safety so that there may be developed a consciousness with regard to health and safety in the school plant on the part of teachers, etc.

Every technique of teaching in use today should be analyzed for its effect on mental health and stability.

Thus, in the evolution of the elementary school, the classroom teacher has emerged from the rôle of instructor of health subject matter to her present strategic position where she is actively concerned with, and participating in, all phases of the school health program.

STATEMENT OF THE PROBLEM

To meet the exigencies of the teacher's personal health needs as an individual, as well as the professional demands exemplified in these recently assumed school health responsibilities, the teacher's pre-service education requires critical study and, perhaps, readjustment. Even this brief résumé of the rise of the classroom teacher to her present pivotal position in the school health program suggests that her pre-service education should differ from that which was found effective when "health" was looked upon as a subject rather than as an objective of education. And such a summary gives rise to a number of questions relative to the professional education of teachers for the school health program:

What is the present program of pre-service preparation?

What is adequate pre-service preparation to meet these changed needs?

How far does the present program approximate the standards of adequacy, and wherein does it fail to measure up to them?

What adjustments can be made to render this preparatory education more adequate, as adequacy is defined by the best available standards?

The present study purposes to seek answers to these four questions. It has a threefold aim: (1) to set up a list of standards for an adequate professional school health program; (2) to determine the status of present-day programs in health education for teachers; and (3) to suggest procedures for a more scientific development of this phase of teacher education.

POSSIBLE OUTCOMES OF THE STUDY

It is believed that this investigation should establish a base line for experimentation in teacher education for school health work. The standards should be useful as a check list for institutions evaluating their own health programs, and as a guide for schools developing their programs. They are, likewise, a potential scale for measuring the adequacy of a teachers college health program, although it is not the purpose of this study to standardize such a scale. The standards listed under "Health Education" indicate desirable content for teachers' health courses—whether they be courses for teachers-in-training, or for teachers-in-service whose preparatory education lacked a consideration of school health problems.

TERMINOLOGY DEFINED

Since there is lack of agreement among health education experts as to terminology, the terms used in this study will be defined as follows. This terminology is in substantial agreement with that used by the White House Conference on Child Health and Protection and the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association.

The School Health Program. This term refers to the sum total of health conditions and activities provided by the teachers college. In this study the school health program includes both health service and health education. The school health program, then, includes everything that the school does to preserve and to promote the students' health, or to educate them in health information, attitudes, and behavior. It includes, also, everything that the students do in cooperating with the school in the above program. And, since the teacher education institution is a professional school—and will thus

be referred to in this study—its school health program must include, in addition to the above, everything that is done in the way of educating the students for assuming their health responsibilities in the schools.

Health Service. This term will be used to designate the various procedures and services provided by the institution for the conservation and improvement of the health of students, faculty, and other school personnel. In some instances, activities classified under health service may be so conducted as to make a contribution to the students' health education. For example, the thorough health examination, although a phase of health service, may contribute to the students' appreciation of the value of the periodic health examination. The examination should be considered health service. The professional advice and guidance given at the time of the examination should be considered an element in Health Education.

Health service in this study includes: (1) health examinations and inspections; (2) health advice; (3) medical, surgical, and dental treatments for the correction of remediable defects and for protection against disease; (4) first aid treatment; (5) infirmary care; (6) guidance in mental hygiene problems; (7) hygiene of the environment (sanitation); (8) hygiene of administration, management, and instruction; (9) nutrition service; (10) provision for the health of the college personnel.

Health Education. This term has been defined as the sum of experiences which favorably influence habits, attitudes, and knowledge relating to health. Health education includes: (1) formal health instruction; (2) informal, individual health guidance; and (3) the incidental contributions to education in relation to health made by any subject or any activity in the school curriculum.

In this study, health education includes the formal health instruction given in such courses as hygiene, public health, or nutrition, herein called "Technical Health Courses." It also includes the contributions made to the students' knowledge, attitudes, and habits relative to health by the sciences basic to health, herein called "Basic Scientific Background," and by other subjects not so closely related to health subject matter, such as principles of teaching, psychology, school management, industrial arts, and other courses. (See tables on pages 78-89.) The term "health education" as used here also covers professional training in the principles, procedures, methods, and materials of education for the health objective, herein referred

to as "The Professional Course." As cited above under *Health Service*, health education includes the marginal contributions to education in relation to health made by certain activities of the health service program as well as by other curricular experiences.

Standards. The term "standards" is used here in the sense of a gauge. These standards were organized for the purpose of having a set of criteria by which to evaluate the health programs of the teachers colleges. It is hoped that they will be considered as guideposts, sufficiently challenging to stimulate and encourage the teachers colleges to engage in experiments that may determine their relative value and that may give factual knowledge to replace expert opinion. In the meantime, they are proposed as dependable criteria and recommendations for the development of the health program in the teachers colleges.

It will be seen, then, that in this investigation pre-service preparation refers not merely to the health courses pursued but also to the entire institutional health program. It is conceived as a dynamic program concerned with ways of living and with the translation of theory into practice, as fully as conditions permit, even while the student is being educated. By its very nature it must be even more an activity program than a lecture or book program. Hence, this investigation includes much more than course offerings in health education subject matter and methods.

CHAPTER II

PREVIOUS INVESTIGATIONS

WITHIN recent years a number of investigators have studied certain phases of teacher education in health, usually by the questionnaire method.

INVESTIGATIONS OF THE COMPLETE SCHOOL HEALTH PROGRAM

One of the most comprehensive of these surveys was that made by Storey under the auspices of the Presidents' Committee of Fifty on College Hygiene.¹ In this study of 442 institutions of higher learning Storey included sixty-one teacher education institutions — thirty-three teachers colleges, and twenty-eight normal schools. Some were studied by personal visit of Committee members and others by questionnaire, for data relative to health service, informational hygiene, applied hygiene (physical education), and administrative hygiene (sanitation). Storey found little or no organized health service in 44 per cent of the teachers colleges and in 46 per cent of the normal schools. While 54 per cent of these institutions required a medical examination, 44 per cent did not require such an examination at any time during the entire course. Mental hygiene was commonly omitted in the teachers' curricula, and 34 per cent of the institutions for educating teachers reported no informational hygiene program. In no institution did Storey find complete integration of all four divisions of hygiene above cited, and, as a result, he recommended "an integrating liaison between departments." His findings relative to the preparation of doctors, nurses, and graduates of private physical education schools for hygiene teaching were adverse.² Nor did he find the preparation of the elementary teacher for health education any more commendable. In his conclusions he states:

The prospective teacher on graduating from the normal school or teachers' college is usually unprepared for the instructional and administrative health responsibilities that obligate every teacher in the elementary school. . . . Such

¹ Storey, Thomas A., *Status of Hygiene Programs in Institutions of Higher Learning*. Stanford University Press, 1927.

² See Chapter VI of this study, pages 45, 46.

preparation is generally impossible as a product of the deficient and defective programs required in hygiene as described here for most of these schools. The graduate who is equipped for such service usually gains his preparation from special additional post-graduate courses.³

On the other hand, the study of the American Child Health Association,⁴ published the previous year, found the health programs in the sixteen teachers colleges and normal schools which it reported in a much more hopeful state of development than those investigated by Storey. The American Child Health Association study, however, details only the programs of the schools that submitted outlines of their health curricula in a national contest. Hence, this group of schools, undoubtedly, was highly selected as to progress in health work and therefore not representative of the country as a whole.

The training of teachers for health and physical education in the state of Iowa was investigated by Reynolds,⁵ who found through visitation and observation that their programs consisted largely of courses in physical training and physiology. Their health supervision was reported as inadequate.

HEALTH SERVICE INVESTIGATIONS

In addition to the general investigations cited above, studies of special phases of the school health program have been made. De Weese studied the health service program in fifty normal schools and teachers colleges in thirty-three states.⁶ His method was not stated. He found that 76 per cent of the fifty institutions required a thorough medical examination at entrance, and correction of remediable defects before graduation. In 82 per cent of the schools the initial examination was followed by subsequent examinations, but only slightly more than half the number (53 per cent) provided health consultation and advice. The majority of schools used school physicians for all examinations (62 per cent), although 28 per cent still depended upon the examination by the family physician. The students' attitudes and conduct toward health factors were considered in the school grades and records in 36 per cent of the schools, and in professional recommendations in 56 per cent of the number. It is

³ Storey, Thomas A., *op. cit.*, p. 112.

⁴ *Some Tendencies in Health Education*. American Child Health Association, 1926.

⁵ Reynolds, Nora, *A Study of the Training of Iowa Teachers for Health and Physical Education*. Iowa State Teachers Association, 1927.

⁶ De Weese, A. O., "Health Service in Normal Schools and Teachers' Colleges." *The Nation's Schools*, Vol. IV, No. 4, p. 54, Oct. 1929.

presumed that these findings represented the status of health service in these schools for the scholastic year 1928-29. And if this be true, this study indicates a remarkable development in this phase of the health program over the programs reported on by Storey two years earlier.

McNeil, in studying the status of entrance requirements to teacher-training institutions, included the topic of health.⁷ She found that twenty-six states required health qualifications of their candidates for teachers colleges and normal schools, while twenty-two did not. On the whole, the requirements she listed are general rather than specific:

Five states state rather generally that the candidate must have good health; sixteen states require a physician's certificate, or passing a physical examination; and seven states require specific qualifications, as the absence of certain chronic diseases or functional disorders, or reaching certain standards in vision, etc. Connecticut refuses admission to candidates who pass all other qualifications, but do not reach the proper standards of health. Idaho studies the physical qualifications of her students the first few months after entrance, and any who have physical defects and disorders which are considered injurious to the student's future success are asked to withdraw.⁸

One study relative to the work of the nurse in the teacher education institution has been published.⁹ Stewart and Brinkerhoff made a questionnaire investigation of eighty-five normal schools where the catalog seemed to indicate that a health program existed. Of these schools forty-two (about 50 per cent) reported employing one or more nurses. These nurses were grouped according to their activities into four categories: (1) those that did matron's work as well as nurse's work, but mostly the former; (2) those that did infirmary and office work; (3) those that did school nursing; and (4) those that taught as regular members of the teaching staff. The authors recommended that nurses take further training and education to equip themselves for the fourth type of work, namely, teaching.

Still another phase of student health service, housing, has been investigated by Strang.¹⁰ In a study of 103 institutions (questionnaire) she found that 75 per cent had one or more dormitories, but

⁷ McNeil, Mellicent, *A Comparative Study of Entrance to Teacher Training Institutions*. Bureau of Publications, Teachers College, Columbia University, 1930.

⁸ *Ibid.*, p. 52.

⁹ Stewart, I. M. and Brinkerhoff, L., "The Nurse in the Normal School." *Teachers College Record*, Vol. XXVII, No. 1, p. 15, Sept. 1925.

¹⁰ Strang, Ruth, "Housing of Students in Normal Schools and Teachers Colleges." *Journal of Home Economics*, Vol. XIX, p. 562, Aug. 1928.

that 89 per cent supplemented their dormitories with other forms of housing, usually the off-campus boarding house. She recommended the use of the cooperative house, common to some of the women's colleges but found in only one of the teachers colleges studied.

In a study by Grote,¹¹ to determine differences with respect to health, academic achievement, and social experience among students living under various types of housing conditions at the Western Illinois State Teachers College, the findings anent health progress are relevant to the present investigation. The data for this study were obtained by questionnaire, interviews, and conferences, and from high school and college records. They were treated statistically to determine the relationship between certain conditioning factors. The resulting correlations were sufficiently high to warrant this conclusion: "Improvement in health is greater for the dormitory group and for the boarders than for other groups, and less for light housekeepers and for the self-supporting group than for other groups. Improvement in spring health scores over the fall health scores was much higher for the dormitory group than for any other group and would seem to warrant the conclusion that the dormitory provides the best opportunity for health improvement offered by any of the types of housing."¹²

As a result of her questionnaire study of housing conditions for women in 125 colleges and universities, Hayes¹³ set up a suggested list of standards which deserve consideration by those interested in problems of housing for women in teachers colleges. Her standards cover such topics as building sites, size of residence halls, space allotment for student rooms, space for house staff, employees and guests, space for social life, food preparation and service units, provision for personal safety and welfare, heating and ventilation, and proper lighting.

Sturtevant and Strang,¹⁴ studying the work of the dean of women in 103 institutions which replied to their questionnaire, found that the dean did not personally supervise the health of the students in those schools having a competent director of health, but, where such

¹¹ Grote, Caroline, *Housing and Living Conditions of Women Students*. Bureau of Publications, Teachers College, Columbia University, 1932.

¹² *Ibid.*, p. 95.

¹³ Hayes, Harriet, *College-Operated Residence Halls for Women Students in 125 Colleges and Universities*. Bureau of Publications, Teachers College, Columbia University, 1932.

¹⁴ Sturtevant, S. and Strang, R., *A Personnel Study of the Work of the Dean of Women in Normal Schools and Teachers Colleges*. Bureau of Publications, Teachers College, Columbia University, 1928.

a director was not provided, the dean spent considerable time on this important phase of student life. Her health work, as reported, included such duties as: inspecting and supervising off-campus houses (76 per cent of the deans reporting); investigating causes of absence (71 per cent); detecting individual health problems (71 per cent); referring health problem cases to physician or clinic (72 per cent); regulating student participation in extra-curricular activities (64 per cent); instituting health projects (42 per cent); giving talks on health (45 per cent); securing speakers on health (50 per cent); referring mental hygiene problems to psychiatrist or clinic (28 per cent); supervising infirmary (19 per cent).

MENTAL HYGIENE SURVEYS

Mental hygiene programs in teacher-training institutions were surveyed by Burnham¹⁵ in 1920, and his survey was repeated by Benson and Altender¹⁶ in 1930. In his questionnaire study of 175 institutions, Burnham found that 78 per cent gave no courses in mental hygiene and that there was a prevalent lack of understanding of the meaning and value of this training. He also noted a lack of teaching material suited to the needs of student teachers. In the 1930 study, 239 institutions were investigated. Here 21.7 per cent reported regular courses in mental hygiene, 80.7 per cent reported that mental hygiene was presented in connection with other courses, and 23.4 per cent stated that they had special lectures in mental hygiene. In addition, 13.3 per cent reported that they had a mental hygiene clinic available to their students, and 5.4 per cent, that a psychiatrist was a member of the faculty or available for assistance with students. During the decade elapsing between these two studies, mental hygiene made marked gains in the professional schools, although the investigators noted that "teacher-training institutions still need information and guidance as to the latest and most practical mental hygiene literature available."

THE TEACHER'S HEALTH STUDIED

Several studies of the health of teachers have been made.¹⁷ While these investigations and surveys have not been concerned specifically

¹⁵ Burnham, W. H., "A Survey of the Teaching of Mental Hygiene in Normal Schools," *Mental Hygiene*, Vol. V, pp. 19-45, Jan. 1921.

¹⁶ Benson, C. E. and Altender, L. E., "Mental Hygiene in Teacher Training Institutions in the United States," *Mental Hygiene*, Vol. XV, No. 2, pp. 225-41, April 1931.

¹⁷ Terman, L. M., *The Teacher's Health*. Houghton Mifflin Co., 1913.

with the health of student teachers, their findings on health conditions existing among teachers in service point to the need of more intelligent care of the health of the teacher during her pre-service course. One of these, Carrothers' study, recommended a more rigid selection of candidates for the teachers college and normal school through the health examination at entrance.¹⁸

The teacher's health, from the point of view of mental hygiene, was investigated by Mason,¹⁹ who studied the case histories of 700 maladjusted school teachers committed to four hospitals for mental patients in the vicinity of New York City. Her conclusions have special implications for the pre-service training of teachers in mental hygiene:

The study points to the need of teaching the simple principles of mental hygiene to all prospective teachers as well as to those in service. While behavior clinics for children are very valuable and necessary at the present time, it will be more worthwhile to direct effort toward helping teachers to form wise mental habits themselves, so that they in turn may be guides to the young children in their care and thereby reduce the number of maladjusted teachers and pupils.²⁰

MISCELLANEOUS STUDIES

While not concerned specifically with the school health program, the Commonwealth Teacher Training Study listed in its master list of 1,001 teacher duties, 106 health activities performed by teachers.²¹ Such a list should furnish leads for the content of health courses for teachers in training and should help to define the specific elements of training.

A report of the experimental development of health education in one teachers college was made by Galdston.²² This study was confined to health education only.

In an effort to discover prevalent health misconceptions existing

Dublin, L. I., *Physical Disability of New York City School Teachers*. Metropolitan Life Insurance Co., 1916.

Wood, Thomas D., *Report of New York Commission on the Welfare of Teachers*. State Teachers Association, 1916.

Carrothers, G. E., *Physical Efficiency of Teachers*. Bureau of Publications, Teachers College, 1924.

Rogers, J. F., *The Health of the Teacher*. Washington, D. C., Government Printing Office, 1926.

¹⁸ Carrothers, G. E., *op. cit.*

¹⁹ Mason, Frances, "A Study of 700 Maladjusted School Teachers." *Mental Hygiene*, Vol. XV, No. 3, pp. 576-99, Aug. 1931.

²⁰ *Ibid.*, p. 599.

²¹ Charters, W. W. and Waples, D., *The Commonwealth Teacher-Training Study*, pp. 393-412 and 499-535. University of Chicago Press, 1929.

²² Galdston, Iago, *Health Education in Teachers Training Schools*. New York, Tuberculosis and Health Association, no date given, 15 pp.

among prospective teachers, Rhoton administered a true-false health knowledge test to 2,379 subjects who were completing teacher-training courses in schools scattered over a wide area.²³ The results obtained were compared with those from 128 experienced teachers completing summer session courses at Pennsylvania State College, to the distinct advantage of the latter group. This study sets forth fourteen conclusions as a result of a statistical analysis of the data. The following are particularly pertinent for the study at hand:

Formal education has failed in a marked degree to remove health misconceptions from the beliefs of the individuals here studied.

In general, the number of health misconceptions subscribed to decreases as the length of the training period increases.

Old-fashioned remedies for the treatment of disease or injury, that have little or no scientific approval, are believed to be effective by a surprisingly large per cent of all groups studied.

The list of unwarranted health beliefs set forth in this study are suggestive for consideration in health education courses.

²³ Rhoton, Paul, *Health Misconceptions of Prospective Teachers*. The Pennsylvania State College, 1932.

CHAPTER III

THE METHOD OF THE INVESTIGATION

CHOICE OF METHOD

THE present study is an outgrowth of the writer's work in the education of teachers for their classroom health responsibilities. In order to solve the constantly recurring problem, "How can teachers best be prepared for their work in the school health program?", it seemed necessary first to seek answers to two preliminary questions, namely:

What methods are now being used to educate teachers for participation in the school health program?

and

What do health experts believe constitutes adequate preparation for teachers in this field?

In order to obviate misunderstanding, it is necessary at this point to state that the writer does not believe that, by pooling existing policies in teacher education in health, a final solution for the original problem stated above can be found. It is only too obvious that present practice is conditioned by the education of the staff available as well as by the financial limitations of the institutions in question and, hence, it is, all too frequently, not representative of what even those connected with the particular institutions believe the ideal program should be. Nor is the collection of "expert" opinions held to be a scientific procedure capable of discovering the truth relative to the major issue in question. Opinions may be right as well as wrong—although in the case of experts in a given field they would probably be the best available opinions but would not necessarily make facts.

Notwithstanding this criticism of two methods frequently used in research studies, it was found advisable to investigate present practice as a basal study in this field of teacher education. The collection of expert opinions was not considered an objective procedure for determining what the program should be; hence, it was discarded entirely. A substitute method, which will be referred to later, was

used instead to answer the second subsidiary question raised at the introduction of this chapter.

It must be emphasized, however, that no recommendations will be made on the basis of these existing practices alone, nor will any so-called "needs" of teachers in this field be based upon such a study. The problem under consideration is a critical study of present programs for educating teachers for the school health program. Hence, a knowledge of existing programs is essential.

Catalogs of the professional schools were utilized in the first attempt to gather the data, but after a fair trial their use was abandoned. They were found helpful in so far as facts relative to faculty engaged in the health program, entrance requirements, and a substantial amount of information anent the content of the health courses were concerned. But the living, dynamic health program which is believed to eventuate in more healthful ways of living either does not lend itself to catalog discussion, or is not thought essential for catalog mention, as none of the thirty-five catalogs examined supplied all the desired data.

INTERVIEW AND CORRESPONDENCE TECHNIQUES

As a more desirable method of gathering comprehensive data from those best equipped to supply the facts, it was decided to employ both the interview and the correspondence techniques. The former, of course, is the more desirable of the two, but circumstances permitted the writer's visiting personally only a limited number of institutions in the East. And, as data for the country as a whole were sought, the inquiry by correspondence seemed the only possible method of obtaining factual information on a large number of items from schools scattered over a wide area. Hence, for a part of the study this technique was used, despite its recognized limitations.

SETTING UP THE STANDARDS

In order to have clearly in mind a picture of the most desirable practice with which to compare and evaluate present practice in health education in the professional schools for teachers, a list of standards for such a program was set up as the first step in the research procedure. The literature in the field of modern health education appearing between 1918, a date commonly accepted as the beginning of the modern health education movement, and 1930, including the unpublished reports of all the sub-committees on

The School Child of the White House Conference on Child Health and Protection, was read. All standards relative to teacher education in health were listed. But, as many represented only the personal opinion of some author, it was found necessary to make a further selection from the standards collected. To do this the following criteria were employed:

1. The standard is the recommendation of a professional health or educational organization. It is not the personal opinion of any health expert, except as that opinion has been incorporated into the group recommendation, and, hence, is believed to express group thought arrived at after deliberate consideration; or,
2. The standard appears in the reports of the White House Conference on Child Health and Protection, or in the reports of the Joint Committee of the National Education Association and the American Medical Association—both representing group agreement.

This refined selection netted 117 standards which were further critically examined in order to discard those which overlapped others in content. In some instances the combination of two or three standards bearing on subsidiary points of one phase of the program resulted in a composite standard giving a total requirement for this particular phase. Where used, this combination is indicated by a number of references following the standard in Chapter IV. Standard number 20 (page 27) is an example of such a composite standard. The final revised list of standards covering all phases of the institutional health program numbers fifty. These standards have been selected from all of the eight sources listed in the special bibliography, pages 108–109, and all appear in sources other than White House Conference reports. But those standards originally appearing in the educational literature numbered I, II, III, IV, V, VII, and VIII were further validated when they were accepted for publication in the White House Conference reports. These standards resulting from published group recommendations are presented as a more objective gauge of what the desirable institutional program should approximate than as the compilation of expert opinions, discredited earlier in this discussion of method.

THE INQUIRY CHECK LIST

With the standards for a comprehensive program as a guide, a data sheet or check list was prepared for use in the correspondence

inquiry. This sheet was first submitted for criticism to a group of thirty specialists in the field of teacher education, candidates for the Doctor's degree at Columbia University, all of whom had had experience either as administrators or as instructors in professional schools for teachers.

THE CORRESPONDENCE STUDY

After revision the inquiry check list was sent in the name of the chairman of the Sub-Committee on the Professional Education of Teachers and Leaders in the White House Conference on Child Health and Protection to the presidents of all institutions for the education of teachers listed in the 1929 Directory of the Office of Education. The privilege, kindly granted by the above chairman with the approval of the chairman of the Committee on The School Child, no doubt accounts for the high percentage of returns. Replies were received from 151 institutions, but, as seven were incomplete, the returns from 144 were used in the tabulations. These 144 schools checked 155 items relative to their complete school health program, making a total of 22,320 items for all schools. In order to discover any existing interrelationships between practice and size of the institutions, and between practice and type of institution, the tabulations on this part of the study were made twice: (1) for schools of various sizes—enrollment under 500 students, enrollment 500–999 students, and enrollment 1,000–4,500 students; and (2) for different types of curricula—two-year normal schools, three-year normal schools, and four-year teachers colleges. These tabulations appear in the tables of the several subsequent chapters.

These 144 institutions are located in forty-five states and the District of Columbia. Four of these states—Delaware, Nevada, Utah, and Wyoming—are represented by their schools of education or departments of education at the state university, as they had not established normal schools. Reports were received from the various sections of the country as follows: New England—5 states and 17 schools; Middle Atlantic—5 states and 27 schools; Southern—12 states and 35 schools; Central—11 states and 37 schools; Western—12 states and 27 schools; and the District of Columbia—1 school. The schools varied in size, the range being between 80 and 4,200 students. Grouping them into classes, 66 were found to have less than 500 students enrolled. Forty-eight schools were found in the group ranging from 500 to 1,000 students, and thirty schools

reported an enrollment of over 1,000 students. All types of curricula were represented, twenty-nine institutions being two-year normal schools, twelve institutions three-year normal schools, and 103 four-year teachers colleges.

THE FIELD STUDY

In order to make a more intensive first-hand study of a limited number of these institutions and to verify the data collected through correspondence, the schools in four states—New Jersey, Connecticut, Rhode Island, and Massachusetts—were selected for the field study. These states were selected, rather arbitrarily, because of their proximity to New York City. Twenty-two institutions for training teachers, the total number in these states, cooperated in this study. But, as one school prepared for high school teaching only, its data were discarded. During the spring of 1932 the writer visited personally these twenty-two institutions, observed the school health program in actual practice, and interviewed such faculty members as were concerned with it. The persons interviewed varied with the individual institutions. In some instances there was but one faculty member engaged in this program. In the majority, however, a number were found cooperating in the work. These were generally the special instructor in health education, the physical education instructor, instructors in home economics and psychology, the dean of women, the school nurse, and the school physician. In addition, wherever possible, a conference was held with the administrative head of the institution. In all, eighty-two persons in these twenty-one institutions were interviewed relative to the institutional health program.

INTERVIEWS

For the field study a data or interview sheet, based on the standards and following the main headings of the inquiry blank, was formulated. It covered the topics of the latter in much greater detail, however, as several questions, one checking the other, were used to collect information relative to one topic. The information thus obtained was further checked by interviewing the school administrator or the person administering the whole health program. During the interviews with instructors, outlines of courses, mimeographed material for student use, and state course requirements were presented as objective evidence of course content. In three-fourths of the institutions, class instruction was observed.

The data obtained by both the interview and the correspondence techniques are analyzed separately for the various phases of the school health program in the chapters that follow. Of the schools where observations were made, sixteen of the twenty-one had previously answered the writer's inquiry for data on the school health program. As the findings from the field study agreed substantially with the data obtained by correspondence for these schools—except in special instances to be indicated in the analysis—there is reason to believe that the data for the schools as a whole are equally reliable.

CRITICAL ANALYSIS AND RECOMMENDATIONS

Recommendations for the future development of health programs in institutions for the education of teachers are made in the light of the standards by which the present programs studied in the investigation have been adjudged adequate or inadequate.

CHAPTER IV

STANDARDS FOR HEALTH PROGRAMS IN TEACHERS COLLEGES

THE school health program in the teacher education institution has been for some time in a state of experimentation and change. The increasing demands for the teacher's services in the school health program have necessitated an expansion and development of the pre-service health education program. Added to these professional demands has come a call for new emphasis upon the teacher's personal health requirements.¹ These needs have given a dual aspect to the professional health program. It exists for the student-teacher as an individual—to conserve and promote her health, to teach her finer and better ways of living, and to give her a cultural knowledge of the subject—just as the health program in a liberal arts college exists to promote better health conditions among the student body and to give the students what should be an educated person's knowledge of the science of health. But over and above these individual needs, the teacher must be prepared to fulfill her obligations as a teacher. While the health service and the student-teacher's personal health development are not without their professional bearing, the teacher's preparation in relation to health, if it is to fulfill the primary aim of professional education, must provide her with that which she will need in order effectively to meet her health responsibilities in the modern classroom.

The widespread attempts to adjust the teacher's preparation with reference to health to meet the needs of the modern school health program indicate the recognition of both the personal and the professional aspects of the teacher's health program. Nevertheless, there is a felt need for defining clearly certain standards appertaining to both these aspects in order (1) to assure their provision in teacher education programs; (2) to facilitate evaluation of existing health programs for teachers; and (3) to furnish guides for further develop-

¹ American Child Health Association. Report of the *Chicago Health Education Conference*, pp. 98-101. 1925.

ments in this phase of the pre-service education of teachers. Hence, the following standards have been set up according to the criteria cited in Chapter III.

THE PROFESSIONAL SCHOOL HEALTH STANDARDS

NOTE: Numbers below Standards refer to the bibliography on pages 108-109.

ADMINISTRATION AND INTEGRATION OF THE INSTITUTIONAL HEALTH PROGRAM

1. The administrative head of the teacher education institution should have direct responsibility for organizing a constructive health program for the school. He should take upon himself the task of securing coordination between the general health program and any other type of work which is in any way related to this health program.

VI (18), 97.
2. The administrator should have an assistant, called the Director of Health Education, who directs the school health program and whose duties will embrace the following:
 - The coordination of the various phases of the school health program, where this is not done by the administrative head.
 - Provision for maintenance of an alert institutional consciousness of the health needs of the students.
 - Maintenance of institutional consciousness of the educational opportunities related to these needs.
 - Securing coordination of the work of various subject matter instructors, so as to provide the student with a well rounded informational basis for her health education work.
 - Giving instruction in health education.
 - Serving as chairman of the faculty health committee.
 - Maintenance of friendly relations with local health authorities.

VI (18), 101, 102, 103. V, 66, 67. II (2), 224.
3. There should be appointed in every college and normal school a properly constituted Faculty Committee on Health in whose membership every staff member who is concerned with the institutional health program, or who teaches health education at any point, should be included. The functions of this committee are:
 - To stimulate interdepartmental interest in the school health program.
 - To assist the school administrator and the director of health education in the formation and execution of their health policies.
 - To unify and coordinate the health instruction now so frequently scattered through a variety of courses and in different departments.
 - To integrate the institutional health program.

VI (18), 22, 67, 101, 102.
4. Every member of the staff should be concerned in varying degree, and according to individual opportunity, with the attainment of the objectives of the school health program.

VI (2), 16.

THE STAFF

5. The physician engaged in the health service program in the teacher education school should meet the following requirements:
 - Graduation from a properly accredited medical school.
 - License to practice in the community.
 - Sufficient private or hospital experience to insure confidence in his judgment.
 - A definite interest in preventive medicine.
 - Specific training in sanitary inspection.
 - A knowledge of child psychology and school health procedures which should be regarded as secondary only to sound medical training.
 - Personal attributes which will most successfully promote the objectives of the health service program.

VI (18), 33c. III (3), 165.

6. Nurses engaged in health service in a professional school for teachers should be trained in the education field, with an A.B. or an A.M. degree in addition to their professional training.

VI (18), 33c.

7. The instructor in health education or hygiene in the teachers college or normal school should be a person of attractive personality, thoroughly prepared in the basic biological, social, and educational sciences and expertly skilled in the methods and techniques of efficient teaching. Specific qualifications should include:

Preliminary college training in:

Biology, physics, and chemistry.

Human anatomy.

Physiology, physiological chemistry, and psychology.

Hygiene and public health (include here the various hygienes—mental, social, personal, and community).

Normal diagnosis.

The theory and practice of education.

Methods and techniques of educational research.

The Ph.D. degree or its equivalent.

Experience in teaching in elementary or secondary schools.

V, 67. VI (18), 20, 63, 64.

8. The teacher of mental hygiene in teacher-training school should have had:
 - Experience in teaching psychology.
 - First-hand contact with psychiatric or clinic work.
 - A considerable amount of attention to case study.
 - Thorough training in child health and development—physical as well as mental.
 - Training in the biological and physical sciences basic to health.

VI (10), 265.

THE INSTITUTIONAL HEALTH PROGRAM

9. A complete health program in a teacher education institution should include:
 - The health service program.

A program of instruction in the fundamental subject matter related to health and health teaching.

Opportunity for observation of and practice in those activities of the school health program for which the teacher is responsible.

VI (18), 96.

HEALTH SERVICE

10. The health service program of the teacher education school should include:
A complete health examination and such subsequent examinations as may be necessary.

The correction of remediable health defects.

Health advice for, and health supervision of, students throughout the course.

The maintenance of a healthful regimen of living.

(Healthful living should be understood to include proper diet, proper hours of sleep, proper clothing, adequate facilities for bathing and laundry, and a well-balanced daily schedule of study, recreation, social life, exercise, etc., as well as the opportunity for healthful mental life in school and out.)

Sanitary inspection of the campus and of the campus buildings, and of student residences on and off the campus.

II (1), 176. V, 66. VI (18), 33d.

Health Examinations

11. All candidates should submit to a health examination by the school doctor, employed or approved for this purpose, at entrance to the institution. The examination should include mental, emotional, and social health standards in addition to standards for physical health. Personality traits as indicated by the former are coordinate in importance with intelligence and scholastic promise. The opportunities for incidental health instruction provided by the health examination should be utilized.

VI (18), 22, 33d. VI (10), 264.

12. The more complete examinations include records of family and personal health history; a record of health since the preceding examination; a record of age, height, and weight; a general examination of the skin, hair, bones and joints, the superficial glands, the eyes, ears, nose, throat, mouth and teeth, heart, lungs, circulation, abdomen, and genito-urinary organs; a laboratory examination of the urine, tests of visual acuity and color vision, hearing, blood pressure and such special examinations as may be indicated in each individual case. Among these special investigations may be mentioned the psychiatric examination, the search for evidence of gonorrhea or syphilis, the use of the X-ray in search of tuberculosis of the lungs or of the other lesions there or elsewhere, special tests of cardiac function, and chemical and microscopic examinations of the blood.

VII, 60.

13. Periodic examinations with a follow-up program and the correction of remediable defects should be made. Examinations following absence due to illness are also desirable.

VI (18), 33d.

14. The health examination should constitute one basis for admission to the teacher education institution. Candidates should be rejected because of incurable defects or disease, communicable disease, noticeable and unsightly deformities, or any of those conditions which would leave a subtle influence of an undesirable type upon children and youth.

III (3), 166. VI (18), 33d.

15. Recommendations as to the students' subsequent program of study and activity as well as to the specific health instruction should be dependent upon the findings of the entrance health examination. These recommendations should be provided for as a part of the health examination.

II (2), 224. VI (18), 33d.

Correction of Defects

16. Every student should have corrected all remediable defects before going out to teach. A reasonable health standard, with proper consideration of the limitations of the individual, should be demanded as a requisite for graduation and employment.

VI (18), 22. II (2), 225. III (3), 166.

17. As far as practicable, the students' attitude and conduct in regard to health examinations, correction of remediable defects, and the maintenance of a healthful regimen of living, should be one basis for recommendation for a professional position.

II (1), 176.

Health Advice and Care

18. Consultation and advice relative to health matters should be available to students whenever necessary. Reference should be made by the institution physician to outside specialists when their assistance is required.

VI (18), 33d.

19. Every residence school should have a small infirmary with isolation conveniences.

VI (18), 33f.

Maintenance of a Healthful Regimen of Living

20. Healthful conditions for student life shall include:

The provision of proper housing with suitable facilities for social life.

A well-balanced dietary under the supervision of a scientifically trained dietitian who maintains close cooperation with the health service.

Facilities for indoor and outdoor recreation and daily exercise.

Supervision of the student load, including home study, part-time employment and extra-curricular student activities, as well as class hours.

Exemplification of principles of mental hygiene in the institution as a whole.

II (2), 225. II (5), 273. VI (10), 267. VI (18), 33e, 42.

Sanitary Supervision of Campus and Residences

21. Campus sanitary inspection should include:

Supervision of heating, lighting, and ventilating systems; janitor service, water supply, and drinking fountains; toilet and washroom facilities; rest rooms, swimming pools and gymnasias; fire prevention and safety of buildings; equipment and grounds; food supply and service; and

medical inspection of food handlers in school cafeterias and dining rooms.

The school should supervise and control the living and working conditions of the students, both in the dormitories and in the off-campus boarding or rooming houses.

II (1), 176. VI (18), 33f.

THE HEALTH EDUCATION PROGRAM

Basic Scientific Background

22. All prospective elementary teachers should have as a scientific foundation for their school health work sound instruction in:

Applied chemistry, biology, applied physiology, applied bacteriology, psychology—general and educational.

II (1), 177. VI (18), 43.

(This does not imply a recommendation of separate courses in each of these subjects.)

Technical Health Courses

23. The course in personal hygiene should be given primarily for the teacher herself, to the end that she may improve her own way of living.

II (2), 226. VI (18), 53.

24. Public hygiene should cover the principles underlying home and community hygiene. It is a very essential phase of the training of classroom teachers for their work in health instruction and health service.

VI (18), 53.

(It is not necessary to give a separate course in public hygiene.)

25. Every normal school and teachers college should offer a course in mental hygiene. Preferably this should be a distinct course. It should be required of all students irrespective of the major courses they are following.

VI (10), 264.

26. The first step in providing the best conditions for the mental health of school children is the selection of well-adjusted teachers, who are calm, deliberate, and well poised. The course in mental hygiene should contribute to this objective.

VI (2), 45. VI (22), 153.

27. Every student-teacher in the mental hygiene course should interest herself in some maladjusted child found at a clinic or in the neighborhood, and should make consistent study and reports over a period of several weeks or months concerning her problem. This study should include case history, personality evaluation, the giving of tests, etc.

VI (10), 265.

Professional Subject Matter

28. The teacher education institution should provide professional training in health content, that is, professional subject matter.

II (5), 450. VI (18), 39.

Content of Professional Courses

(References do not mean separate courses, necessarily. The teacher's professional course in health should draw upon several technical fields for its materials.)

29. The training of teachers for more capable, intelligent cooperation with, and responsibility to, the health service is a matter of extreme urgency. This necessitates an understanding by teachers of the whole health program, of the problems it is trying to meet, and of their share in the enterprise.
VI (9), 24. VI (18), 33b.
30. Teachers-in-training should receive instruction and practice which will fit them to conduct activities related to the objectives of the health examinations. The teaching personnel must always be alert to detect physical defects and departures from normal status of individual pupils, even in schools where medical examinations are given to all pupils.
III (2), 158. VI (9), 23. VI (18), 33a.
31. When the service of a physician is not available for a yearly health examination, a health screening or inspection can be made by the classroom teacher. (This inspection should be conducted with full respect for the personality of the child.) Hence, the teacher should be adequately trained to detect those pupils most obviously possessing health defects who should be referred to family or school physicians for complete examination and technical diagnosis.
VI (2), 27.
32. Classroom teachers should make a preliminary test of the vision and hearing of children and should receive instruction in the manner of making these tests. They should also be instructed in the best methods of conserving sight.
IV (2), 45. VI (9), 10, 11. VI (22), 95.
33. When there is no nurse, the teacher must assume the added responsibility of urging the parent to seek correction of defects.
VI (9), 5.
34. The rural teacher must be nurse, inspector, teacher, and perhaps her own medical counsellor. She must carry great responsibility in protecting children against contagious diseases and must assume responsibility for their exclusion from school.
VI (2), 32. VI (9), 16.
35. There should be a morning health inspection of all pupils in order to detect significant and approved signs of health disturbance and to prevent and control communicable diseases. This is the responsibility of the classroom teacher. (Here, again, the inspection should be conducted so as not to give offense to the child in question, or to other children in the room.) In addition, the teacher should be alert to notice any signs of importance which may appear during the school day.
VI (2), 31. VI (9), 8. VI (13), 4.
36. In order that they may do their share for the prevention of contagion in the school health service program, teachers need special training and practice in recognizing the following suspicious signs of communicable diseases, for which children should be excluded from school:
Nausea, vomiting, chill or convulsions, dizziness, faintness or unusual pallor, eruption of any kind, fever, running nose, red or running eyes, sore or inflamed throat, acutely swollen glands in the neck, cough,

headache, earache, and other deviations from normal. The teacher should refer children with these symptoms to the principal immediately.

VI (9), 23. VI (12), 32. VI (13), 7.

37. Every effort should be made on the part of elementary teachers to cooperate with public health officials in educating children to the importance of the prevention and control of communicable diseases through immunization and other measures. Their pre-service training should equip them to handle this problem in their work of health instruction.

VI (2), 2, 3, 34, 35.

38. There should be incorporated into the teacher's health curriculum not only specific instruction in the facts of nutrition, but also training in the methods of presenting the subject matter effectively to children of various age levels. The study of methods in connection with the subject matter should include a consideration of varying local situations and differences in economic status among the children to be taught.

IV (1), 59, 60. VI (2), 34. VI (14), 5, 9.

39. There should be provision for the training of teachers in safety education in order that they may be led to a realization of the importance of giving instruction in safety to children.

VI (2), 47. VI (20), 12.

40. Teachers should receive instruction in the elements of school hygiene (hygiene of the environment, and sanitation).

VI (2), 38.

41. The training of teachers should include a study of the hygiene of instruction. (Methods used in instruction, materials of instruction, teacher-pupil relationships, the program of the school day.)

VI (18), 39. VI (22), 156.

42. Teachers should be provided with a technique to assist them in locating and selecting health problems which will be meaningful and appropriate to their individual groups. Every teacher should know how to make an objective analysis of the health forces, factors, materials, and natural situations within the home, the school, and the community which should be considered in her work of health instruction. Through such an analysis, the activities and situations used for instructional purposes will grow out of the needs and experiences of the pupils.

VI (5), 32, 36, 43, 91. VI (18), 40.

43. Teachers need reliable guides which will assist them in making selections and adaptations from behavior scales of specific objectives appropriate to their own pupil needs.

VI (5), 26.

44. Teachers should be trained to emphasize the positive aspects of health and all aspects of health, mental, social, and moral as well as physical.

IV (1), 33. VI (5), 32.

45. The teacher should receive special instruction in habit formation with reference to health.

VI (5), 45, 32.

46. Teachers should be assisted to understand and to use basic principles rather than specific devices in developing correlations.
VI (5), 39.
47. The critical judgment of student-teachers should be trained in respect to the scientific soundness of subject matter. They should be given educationally sound criteria for evaluating health education material.
II (3), 322. VI (5), 30. VI (22), 156.
48. Teachers should be prepared to participate in activities which promote cooperation of home and school in the health program, such as addressing the parent-teacher association relative to the school health program.
VI (18), 40.

OBSERVATION AND PRACTICE

49. The campus demonstration school should exemplify in its health program the best standards for elementary school health work. It should have a complete program of health service and health education with teachers adequately trained for the school health program. There should be direct cooperation between the college health instructor and the training school.
VI (18), 96. VI (22), 46. VIII, 202.
50. The students' observation and practice in school health work should be correlated with the regular academic course in health, and the college teachers in this subject should work in close relationship with the staff of the practice school. Students should receive training through practice teaching in:
- Cooperating with the school nurse and physician in carrying out the health service program, such as making morning health inspections.
 - Using records and making observations of the health of pupils or of their health habits.
 - Making certain simple tests of pupils' health, such as giving vision and hearing tests.
 - Managing the classroom or school so that the environment and procedures are physically and mentally healthful.
 - Cooperating in extra-curricular activities bearing upon the health of pupils.
 - Having conferences with pupils in relation to health matters.
 - Using community public health facilities as teaching material.
 - Participating in activities which foster cooperation of home and school in the health program, such as making home visits and taking part in parent-teacher meetings.
 - Giving health instruction and integrating health instruction with other activities.
- II (5), 450, 451. IV (1), 241. VI (1), 368, 369. VI (18), 23, 44.

CHAPTER V

THE INTEGRATION OF THE SCHOOL HEALTH PROGRAM

AS INDICATED BY THE FIELD STUDY

FOR the most effective school health work the coordination of the various school health activities and their integration into a unified program is held to be essential. The standards set up for this study place the responsibility for this unification upon the administrative head of the teachers college or normal school.

School health programs were found organized in various stages of development in all the twenty-one institutions studied at first hand. But in no case was there direct integration of the program by the administrative officer of the school. In three instances administrative consciousness of this need was expressed.

Coordination of Phases of the Program

There was found in but one instance a health educator who supervised all health activities. And, here, she held the title "Professor of Health Education" rather than that of "Director" as suggested in the standards. In other institutions partial integration had been secured by the coordination of two or more phases of the school health program. In eleven of these twenty-one schools the physical education instructor also taught the health courses. These physical education teachers testified to attempting to coordinate the school health programs in their schools. But that this arrangement did not achieve a completely integrated health program, can be seen from the data relative to two other standards which were used as a check on the point under consideration. Standard 14 calls for the utilization of the findings of the students' health examination at entrance, both in the personal hygiene course and in making recommendations relative to the students' scholastic load and daily régime of living. Of the eleven institutions in which the coordination was attempted by the physical education teacher, ten used the findings of this initial health examination only to suggest modifications in the

physical activity program of the individual students. And in only two of these eleven institutions under consideration the college instructor of health education—in these schools, the instructor of physical education—supervised the training-school health education program as advocated by Standard 49. If a completely coordinated program had been achieved in these eleven schools, the requirements of both these standards, to mention but two, would have been met.

A further analysis of the duties of these physical education instructors who were teaching health education shows that in eight institutions of the eleven referred to above, they did not cooperate in the health service program to the extent of following up the correction of defects. On the other hand, in four institutions where the physical education teacher did not engage in health education, and where the institution had a regular, full-time health education instructor, the physical education instructor followed up the health examination and held conferences relative to the correction of defects. In these four instances the health service program was entirely divorced from the health education program but was coordinated in a limited way with the physical education program. The health examination cards were kept in the physical educator's office where they were available to the health education instructor. But in three cases out of the four they were not consulted, according to statements made by both the health education and the physical education instructors concerned. One health education instructor admitted being entirely unfamiliar with the number and times of the medical examination as well as with the use of its findings, her time being too much taken up with the more important academic work "to be bothered with such routine." If the course in personal hygiene is to be given for the purpose of helping each individual student to improve her personal health, it would seem essential for the instructor in charge of such a course to know the health needs of these students individually as they have been revealed by findings of the health examination and by personal conferences with students.

A further lack of cooperation, and consequent lack of integration of the school health program, was seen in four institutions in which the resident nurse was engaged in dormitory work but did not participate in the health examinations at the school, in their follow-up, or in keeping the students well. The first official contact these four nurses had with the student body of their respective schools occurred when a student became ill or indisposed.

In three instances the instructors of health education coordinated the health service and the health education in their colleges. But, in all three cases, there was no correlation of observation and practice nor of the training-school health program with the college health program. And a general faculty interest in the school health program had not been aroused. In two of the three schools cited there was no provision for the mental hygiene program. The coordination of health activities in these three schools, which was good so far as it went, fell short of achieving the unified program suggested by the standards.

The Director of Health Education

Of the twenty-one institutions studied at first hand, one exemplified to a greater degree than any of the others the desired unity of effort and coordination of activity in the interest of a well-rounded school health program. In this school, where the director of health activities was the professor of health education,¹ this staff member supervised the health service and the health education in the college, as well as the health service and the health education in the campus demonstration school. Even here, however, certain lacks such as the absence of an institutional mental hygiene program and of any provision for planned, supervised practice in the school health program, as a part of the regular practice, militated against the achievement of the complete program of the standards herein used. And the fact that this professor also supervised the physical education programs in both the college and the campus demonstration school necessarily limited the time which she could give to the needs of the school health program.

Undeveloped Phases of the Program

A study of the methods of integration obtaining in these twenty-one institutions showed that the mental hygiene program and the program of observation and practice were the two phases of the complete health program least well developed, and least often existing as coordinate parts of the whole. The mental hygiene program was well organized, and existed as a school policy rather than as a school subject, in but one of the twenty-one schools visited. A second school gave a mental hygiene course which would meet the standards set up for this subject in Chapter IV. But the course was reserved

¹ See pages 32 and 41.

for seniors who were students preparing for junior and senior high school rather than for classroom teaching. Four colleges gave mental hygiene lectures in the psychology courses. These courses, however, were not considered a part of the school health program, and no attempt at cooperation between the instructors in health and in psychology had been made. In eleven of the twenty-one institutions student maladjustments were handled by the dean of women. In these eleven institutions closer cooperation obtained between the health education instructors and the deans than between the former and the psychologists. In two instances a lack of any appreciation of the mental hygiene program was expressed by the instructors of health and physical education. One believed "it only stirred up problems." Another believed that any faculty member could handle a student's personality or maladjustment difficulties, as had always been done in his institution.

On the other hand, the health observation and practice program in these twenty-one schools was almost non-existent. In most cases practice in school health activities was accidental, and rarely supervised by the college health department. Planned observation, however, was found in three instances. The seeming neglect of this entire division of the school health program was the most noticeable lack in practically all the schools visited, and the chief obstacle to integration of the health work in the college and the training school departments.

The Faculty Health Committee

Among professional health workers the faculty health committee has been advocated as a means of integrating the institutional health program.² Such a committee had been organized in but three of the twenty-one schools visited (14 $\frac{2}{7}$ per cent). This committee had been tried as a means toward integration in two others, but, as it had not functioned effectively, it was abandoned. Four colleges had faculty personnel committees which considered student health one of their responsibilities, but these committees did not attempt any integration of existing school health activities. Where the faculty health committee existed, it functioned in studying institutional health courses to eliminate duplication of teaching material, in discussing student health problems, in studying student load,

² American Child Health Association, *Some Tendencies in Health Education*, pp. 22 and 34-37.
White House Conference on Child Health and Protection, *The School Health Program*, p. 381.

student failures, and better student adjustments, and in educating its own members along the lines of health appreciation.

The institutional health program had not yet come to be a concern of every faculty member (Standard 4), according to the statements of administrators and instructors. In these twenty-one schools it was said to be a responsibility of only those engaged in some form of health work and those serving on health committees.

AS INDICATED BY THE CORRESPONDENCE INQUIRY

The Faculty Health Committee

An analysis of the returns from 144 teacher education institutions studied by correspondence showed that the faculty health committee was organized in 38 per cent of all schools answering the inquiry—a percentage of frequency more than two and one-half times as great as that found in the field study. Further analysis of the data secured by inquiry, however, showed that the discrepancy may be due to the fact that the schools visited were small or medium in enrollment, and those reporting faculty health committees in the correspondence inquiry were nearly always those with an enrollment of more than 1,000 students. Of the schools with an enrollment of less than 500 students, 32 per cent reported the organization of a faculty health committee. Of those with an enrollment of 500–999 students, 42 per cent reported such a committee, and of those with an enrollment of 1,000 or more, 47 per cent indicated such a faculty group, showing a greater tendency toward such a faculty organization in the interest of student health in the largest schools.

The fifty-five schools with faculty health committees reported a wide range in personnel, size, and activities of their committees. As seen in Table I, twenty-five different staff members, and in one case student representatives, were found serving on these committees. Those found most frequently, as indicated in the rank order, were: the director of physical education, the physical education instructor, the dean of women, the nurse, the physician, the president of the institution, the director of health education, and the biology instructor. It is interesting to note that the percentage of schools in which the director of health education was found on the faculty health committee was exactly one-half that for the director of physical education, and slightly more than one-half that for the physical education instructor. As it is only logical to expect that the director of health or the instructor of health would be the first person chosen

TABLE I

PERCENTAGES OF 55 TEACHER EDUCATION INSTITUTIONS WITH VARIOUS FACULTY MEMBERS ON THE HEALTH COMMITTEE, 1929-1930

Faculty Members	Schools Classified according to Enrollment			Schools Classified according to Curricula			Un-classified Total	Rank Order
	38-499	500-999	1000-4500	2 Years	3 Years	4 Years		
	N-21	N-20	N-14	N-13	N-4	N-38	N-55	
Director of physical education.....	71	75	86	69	75	79	76	1
Physical education instructor.....	57	70	86	38	50	82	69	2.5
Dean of women.....	48	80	86	62	50	74	69	2.5
Nurse.....	29	65	43	38	50	47	45	5
Physician.....	33	50	57	31	25	53	45	5
President.....	57	30	50	62	50	39	45	5
Director of health education.....	48	40	21	46	50	34	38	7.5
Biology instructor.....	24	30	71	8	25	50	38	7.5
Dietitian.....	24	45	43	31	25	39	36	9
Home economics instructor.....	24	30	57	23	50	37	35	10
Principal of training school	19	25	43	31	..	29	27	11
Psychology instructor....	24	30	21	15	25	29	25	12
Training school teachers..	14	5	21	..	25	16	13	13.5
Dean of men.....	..	20	21	..	..	18	13	13.5
Heads of departments...	..	5	14	8	25	3	5	15
Dean of studies.....	..	..	7	..	..	3	2	21
Registrar.....	..	5	..	8	..	..	2	21
Supervisor of rural practice schools.....	..	..	7	..	..	3	2	21
Teacher of tests and measurements.....	..	5	..	8	..	..	2	21
Geography instructor....	5	..	..	..	..	3	2	21
English instructor.....	5	..	..	8	..	..	2	21
Chemistry and mathematics instructor.....	5	..	..	..	..	3	2	21
House mother.....	5	..	..	8	..	..	2	21
Sociology instructor.....	..	5	..	..	..	3	2	21
Superintendent of buildings.....	..	5	..	..	..	3	2	21
Boy and girl from student council.....	..	5	..	..	..	3	2	21

for membership on the faculty health committee, these percentages indicate the comparative infrequency of the appointment of such a special health instructor in these 144 teacher education institutions, and the comparative frequency of instances where the staff member in charge of physical education was responsible, also, for the health

education. Further data found in Chapter VI on Staff establish conclusively this fact. The president was found to be a member of the faculty health committee as frequently as the doctor and the nurse, indicating administrative interest in, and responsibility for, the health program in at least 45 per cent of the fifty-five schools having these committees.

In 73 per cent of the committees, the director of health education or the director of physical education, usually the former, served as the chairman. The dean of women assumed the chairmanship in

TABLE II
PERCENTAGES OF 55 FACULTY HEALTH COMMITTEES IN TEACHER EDUCATION INSTITUTIONS CARRYING ON VARIOUS HEALTH ACTIVITIES, 1929-1930

Activities	Committees in Schools Classified according to Enrollment			Committees in Schools Classified according to Curricula			Un- classi- fied Total	Rank Order
	38-499	500-999	1000-4500	2 Years	3 Years	4 Years		
	N-21	N-20	N-14	N-13	N-4	N-38		
							N-55	
Securing changes in interest of health of students	90	95	86	92	75	92	91	1
Promoting personal health of students.....	90	85	93	85	100	89	89	2
Receiving reports on student health.....	76	85	86	69	75	87	82	3
Planning the school health program.....	71	75	79	77	50	76	75	4
Integrating the school health program.....	57	65	79	62	75	66	65	5
Supervising student living conditions.....	57	70	50	62	..	66	60	6
Planning student load...	48	55	43	62	..	50	49	7
Approving daily régime..	38	45	36	38	..	45	40	8.5
Supervising extra-curricular activities.....	38	55	21	38	25	42	40	8.5
Conducting research in health.....	14	45	43	38	50	29	33	10
Surveying courses to determine their contribution to health education	..	5	..	..	25	..	2	11

four committees, the president in three, the head of the biology department in two, and the biology instructor, the psychology instructor, and a science instructor in one instance each.

The size of the individual committees varied as much as the per-

sonnel, the range being between 2 and 20 members, with 7 members as the mode and 6 as the median.

These fifty-five faculty health committees reported centering their activities, first, about conditions relative to student health, and, second, on the health education program. Table II indicates the kind and frequency of these activities in the rank order of their occurrence, and the percentage of committees engaging in them. The size of the institution and the type of curriculum offered do not seem to affect the choice of activities for committee work, with the exception of research, which is engaged in slightly more frequently by the committees found in institutions of the highest enrollment. The average committee carried on six of these eleven activities during the school year 1929-30, and two-thirds of them carried on between five and eight activities in relation to the school health program. As will be seen from Table II, the activities most frequently carried on were those relative to the promotion of student health. Only slightly more than three-fifths of these fifty-five committees utilized their opportunity for integrating the school health program, a special duty assigned them in the standards. And only one committee surveyed the course offerings of the institution for the purpose of determining the contributions of the courses to health instruction.

SUMMARY

This study of twenty-one institutions for educating teachers indicates that all these schools were doing something toward educating teachers for their school health responsibilities. The health service and the health education phases of the complete health program were found at least in some stage of development in all the schools visited. Provision for observation and practice in the school health program had not been generally made. The mental hygiene program was least well developed. The director of health education, supervising and coordinating all phases of the health program and devoting full time to the school health program, was not found in any of these twenty-one institutions. Frequently a staff member, such as the person giving instruction in health, effected a partial integration of health activities by coordinating those phases of the school health program for which she was directly responsible. But, since this instructor lacked supervisory or administrative authority, it was not possible for her to integrate contributions from other departments

with her own work. Nor could she assume responsibility for the institutional health program as a whole.

Under the present organization of health work in these institutions the responsibility for the various phases of the school health program was delegated to a number of staff members, usually health instructors, doctors, nurses, physical education instructors, deans, and psychologists. No staff member was charged with an over-view of the many departmental contributions to the health program for the purpose of studying their duplications and lacunae and suggesting a more effective coordination of effort.

Where integration was attempted it was only partially achieved. For example, hygiene instruction was given, in some instances, by the physical education department, while all other phases of the school health program existed in isolation, totally unrelated to this one phase foisted on the physical education department.

The faculty health committee had not been generally adopted as a means of integrating the school health program. It was established in only one-seventh of the schools visited and in slightly over one-third of those studied by correspondence. And, where it had been established, it carried on activities related to student health more frequently than those related to the integration of the program.

The data presented thus far in this study show that, in the schools herein studied, there is need for further organization and development of the institutional health program for teachers so as to include those phases not yet established, or receiving relatively little emphasis, namely, mental hygiene as a school policy, and the provision for observation and practice in the activities of the school health program. The efficiency of the institutional health programs should be promoted by closer cooperation of participating staff members, and by the appointment in each institution of a director for the complete health program.

CHAPTER VI

THE STAFF ENGAGED IN THE SCHOOL HEALTH PROGRAM

AS SEEN FROM THE FIELD STUDY

DATA gathered through the field study showed that the physician, the nurse, the physical education instructor, the health education instructor, and the psychologist were the staff members most frequently engaged in the activities of the school health program.

The Health Service Staff

Of the twenty-one institutions visited, eighteen utilized for the entrance health examinations the services of part-time physicians approved for this purpose by the school, and, in the case of one state, by the state educational authorities. Three institutions had their own physicians. In the eighteen instances cited, the medical examiner was a practicing physician with the required medical training and experience but without the special educational training recommended in the standards. Two, however, were city school physicians and it is thought that, from experience, they should have acquired the educational outlook so much desired in the health examination, although not a substitute for the specified educational training. In the case of the three schools with their own staff physicians, two shared the services of a physician with educational training also. One institution had a resident physician, previously trained in physical education, who directed both the physical education and the school health programs.

The same lack of specific preparation in education was manifest in the case of the nurses employed by these institutions. Eight schools employed full-time nurses. In three of these schools, however, the nurses were primarily health educators with secondary duties in the health service program. Hence, they will be classified under health instructors and their preparation treated there. The five remaining institutions with staff nurses employed six such workers, two being found in one school. In four schools the nurses were

engaged solely for dormitory duty. In the fifth, the nurse assumed responsibility for the follow-up service of the school health examinations as well as for the health of the dormitory students. None of these nurses had had special training in education. Only one held the Bachelor's degree.

Gauged by the standards used in this research, the background training of the health service staff—the doctors and the nurses—is found wanting in relation to adequate preparation in education. The health service program, both in the professional institution and in the training or demonstration school, is established not merely as a preventive measure but also for its educational values. With reference to this point the Sub-Committee on Medical Service of the White House Conference on Child Health and Protection says:

Medical service can and should contribute very definitely to the health education of the child. Whenever the doctor comes in contact with the child in the health examination, in the control of communicable disease, or in special conference, he should keep in mind the fact that one of the objectives in the health program is the education of the child about his health. School health service should foster favorable attitudes in the child toward health. That the child is learning about health and forming attitudes toward health is just as true in the health examination as it is in the classroom. That health service has significant contributions to make to health education should be accepted as a part of the policy in every health program.¹

This recommendation is just as applicable to the health service program for the teacher in training. For the best understanding of the institutional health service needs, and for the utilization of all the educational possibilities inherent in the health service program, the doctors and nurses engaged by the teacher education institutions should be equipped with more adequate preparation in the field of education than that offered by the majority of the health service staff of the twenty-one institutions under consideration.

Health Education Instructors

Next let us consider the staff engaged in health education. It was found that some twenty-three instructors taught health courses in these twenty-one institutions. The academic preparation of these instructors, in terms of degrees held, is shown in Table III. The Master's degree was most generally held, although more than 50 per cent of these instructors had not received this degree. Only one

¹ White House Conference on Child Health and Protection, *The School Health Program*, pp. 87-88. 1932.

instructor was a Doctor of Medicine, and no instructor was found to have earned the degree of Doctor of Philosophy—that specified by the Standards as the *sine qua non* for the college health education instructor.

TABLE III
DEGREES HELD BY 23 INSTRUCTORS IN HEALTH EDUCATION IN
21 TEACHER EDUCATION INSTITUTIONS, 1931-1932

Degree	Number of Instructors	Percentage
Ph.D.....	0	0
M.D.....	1	4
M.A. or M.S.....	10	43
B.A. or B.S.....	7	31
No degree.....	5	22
Total.....	23	100

These twenty-three health education instructors came to their present work largely from the fields of physical education, science, and nursing. The largest number of instructors, thirteen, or 57 per cent, came with a background of physical education. Twelve of these thirteen instructors were still engaged in physical education, as well as in health education, in the institutions where they taught when interviewed. In these smaller institutions encountered in the field study it seemed the usual procedure for the instructor of physical education to give the health instruction. Four of these physical education instructors had taken further training for their health education duties. But nine admitted having had only such preparation in health education subject matter as was offered in their physical education training courses. Of these thirteen instructors with a background in physical education, one held the M.D. degree, five the M.A., and two the B.A. Five had no degree.

Six instructors (26 per cent) represented the field of science, having specialized in the biological sciences. Of this group three held the Master's degree, and three the Bachelor's degree.

Four instructors of health education (17 per cent) came from the field of nursing. Three had taken further training. Two of these had earned the Master's degree and one the Bachelor's degree.

Only three of the twenty-three health education instructors had had previous classroom or high school teaching experience as suggested by the Standards. This means that only 13 per cent of these

instructors had had experience in the specific work for which they were educating students.

Comparison of Training with Standard

A comparison of the findings relative to the preparation of the health education instructors in the twenty-one institutions studied here with the Standards used in this study shows that in no instance was the academic requirement of the Doctor of Philosophy degree in health education met. The research requirement was also lacking. Perhaps more serious from the point of view of class teaching, however, is the apparent lack of specific preparation for health education shown by the teachers coming into this work from special fields. With the exception of the specialists in science, none of the instructors met all the requirements for training in the basic sciences called for by the Standards. And none of these college health education instructors had had as much training in mental hygiene as the Standards, herein used, set up for the preparation of the elementary teacher! The health education instructor in the professional institution may not have to be a mental hygiene specialist, but her professional preparation should give her a sufficient grasp of the subject and sufficient experience in its application to instill in her an appreciation of its value and its place in the complete school health program. The lack of experience in elementary teaching indicated in the preparation of 87 per cent of the instructors may account in some measure for their failure to recognize, with reference to health education, the principle applied in all acceptable programs of teacher preparation, namely, that "the training school is the heart of the teachers' curriculum," and as such the center of student-teacher preparation. That it was not so recognized in these schools is seen in the report of observation and practice in Chapter IX. Unfamiliarity with the level of teaching for which the students are preparing cannot but affect detrimentally the organization of the professional course, as was the case in these instances (see Chapter VIII). It limits decidedly the help which the instructor can give her teachers in their pre-service preparation.

The wide variety of background training presented by these instructors in health education raises the question "Who shall give health instruction?" This is a much mooted problem, and before it can be said for these college instructors that the open-door policy is best, there is need of more evidence in support of this belief than

the mere fact that persons with varying backgrounds are now holding positions in the field. This question can be answered only by careful evaluation of the results produced by instructors representing various previous preparations under controlled conditions. Such research awaits the production of instruments for measuring teaching success, and better measuring scales for determining pupil achievement in health. And, if health education is to have professional respect, the training of a health educator who is to teach at the college level should be standardized. Then, persons from varying fields might successfully take this training for a period of years if necessary. At the end the specific education for a "health educator" would be understood as well as the pre-professional requirements—a condition now obtaining, for instance, in the case of physicians and certified clinical psychologists. The open-door policy without a standardized training beyond the portal of entry would be about as valuable for the health educator as the open-door policy, with whatever training the major professor should determine necessary, would be for the education of a Doctor of Medicine. The policy of creating a special profession of health education is not advocated, but the facts produced in this research show that at present the term "health educator" has no particular meaning. As far as previous preparation is concerned, it may mean anything. There should be at least a common denominator of education in the preparation of all health educators, irrespective of previous training or field of work.

Storey's Findings on the Preparation of Health Educators

It is significant at this point to note the findings on the qualifications of health educators from the research study of Storey. In the conclusions of his study we read,

The physician on graduation has not been prepared for service as a teacher of hygiene in any of the four main divisions of the hygiene program. He is probably more nearly ready than the product of any other institution of higher education, but he is not prepared for teaching. He has had little or no experience with (1) periodic health examinations, (2) mental hygiene, (3) societal hygiene, (4) sex-social hygiene, (5) industrial hygiene, (6) family hygiene, (7) applied hygiene in physical education, sports, or athletics or (8) administrative hygiene. The physician is not prepared for the service generally expected of him as a professional health adviser and counsellor for men, women, or children who are apparently well. His preparation has been concentrated on the nature of diseases and their treatment and, to a much less extent, their prevention. He has had little or no direct preparation or training in mental, physical, or societal hygiene.

Relative to the nurse, he says:

The nurse is the product of a special curriculum that prepares her primarily for sickbed and hospital service—the only fields in which she was formerly found. Her required preliminary education may comprise a year in a high school or less. A few schools require more. The typical training school curriculum does not equip the nurse for service as a teacher of hygiene or as a health adviser. In spite of the fact that over 5,000 nurses are engaged in the public health field where they are acting as health teachers and for which they must gain post graduate training, the undergraduate general and special education of the nurse both fail to justify the common assumption that she is prepared as an authority on or as a teacher of hygiene. Her training is for another very important field of service.

His findings on the physical educator trained in private professional schools are:

The director or teacher produced by the private school of physical education is as a rule adequately prepared only for technical service in programs of physical education, intramural sports, and athletics. His prerequisite general and professional education is not equivalent to that of the physician. His general education is not as a rule equivalent to that of the college graduate. On the basis of the curriculum of the private school of physical education alone, he is not qualified as a teacher or as an adviser in hygiene outside of his special technical division in that field and, sometimes, not even in closely allied fields.²

Storey's conclusions bear out the findings of this research that there is need for the application of higher standards in the selection of those who are to teach hygiene, especially those who are to teach it to prospective teachers.

THE CORRESPONDENCE INQUIRY

Health Service Staff

The returns for the staff from the 144 institutions answering the inquiry corroborate the findings relative to training and experience found by the interview technique and by checking with the school catalogs. A total of 91 physicians was reported employed by these 144 institutions. Twenty served full time and 71 part time. Only 13 per cent (12) of the total number of physicians reported additional educational training. The number of full-time nurses was 79. Of these, 52 per cent carried on teaching as well as health service duties, and 47 per cent functioned as nurses. None of those engaged solely in nursing reported special training in education, and, of those with health instruction responsibilities, less than half (44 per cent) had received the Bachelor's degree.

²Storey, Thomas H., *op. cit.*, pp. 112-13.

Health Education Instructors

A total of 200 health education instructors was reported for the 144 institutions. Table IV shows the distribution of degrees held by these instructors, according to size of institutions. There is a fairly even distribution of Master's and Doctor's degrees among the three classes of schools, with a greater tendency to find the Bachelor's degree in the institutions with smallest enrollment. Again, as in the field study, the Master's degree is the modal degree for the health education instructor, but the number of instructors of health education in the country as a whole with "no degree" (2 per cent) is much smaller than that found in the block of states investigated by the field study (22 per cent).

TABLE IV

PERCENTAGES OF HEALTH EDUCATION INSTRUCTORS WITH ACADEMIC DEGREES IN
144 TEACHER EDUCATION INSTITUTIONS CLASSIFIED
ACCORDING TO ENROLLMENT, 1929-1930

Title or Degree	Health Education Instructors in			Unclassified Total
	Schools with Enrollment under 500	Schools with Enrollment 500-999	Schools with Enrollment 1,000-4,500	
R.N.....	6	14	16	11.5
R.N. and B.S.....	10	11	5	9.
B.A.....	42	27	19	30.
M.D.....	1	7	12	6.5
M.A.....	37	33	41	36.5
Sc.D.....	..	..	2	.5
Ph.D.....	3	4	5	4.
No degree.....	1	4	..	2.
Total percentage.....	100	100	100	100
Total number.....	71	71	58	200

The previous experience of the health education instructors reported by the 144 institutions throughout the country parallels closely that reported by the field study. It will be seen from Table V that, again, the prevailing background-training of the instructor has been that of the physical educator, with training in nursing ranking second, and training in science, third. In the field study it will be recalled that the science background ranked second, and nursing, third.

TABLE V

PERCENTAGES OF HEALTH EDUCATION INSTRUCTORS WITH VARIOUS KINDS OF
PREVIOUS EXPERIENCE IN 144 TEACHER EDUCATION INSTITUTIONS
CLASSIFIED ACCORDING TO ENROLLMENT, 1929-1930

Previous Experience	Health Education Instructors in			Unclassified Total
	Schools with Enrollment under 500	Schools with Enrollment 500-999	Schools with Enrollment 1,000-4,500	
Physical education teacher...	58	45	41	48.5
Nursing.....	13	25	21	19.5
Biology or science teacher...	14	13	20	15.5
Physician.....	1	7	12	6.5
Grade teacher.....	7	6	..	4.5
Nutritionist.....	..	3	2	1.5
Psychology teacher.....	1	..	2	1.
Dietitian.....	..	..	2	.5
City health department.....	1	..	..	.5
High school mathematics teacher.....	1	..	..	.5
Dean of a college.....	..	1	..	.5
Unaccounted for.....	3	..	..	1.
Total percentage.....	100	100	100	100
Total number.....	71	71	58	200

SUMMARY

The staff engaged in the health programs of the teacher-training institutions studied represented a wide variety of types of training and previous experience. The professional staff engaged in health service—doctors and nurses—showed a noticeable lack of training in the field of education which was recommended in addition to their professional education. Few institutions reported full-time staff physicians. The practice of using part-time physicians to give the special health examinations at entrance and at other stated times, and for call in case of emergency illness, prevailed. In these cases the follow-up work was carried on by another staff member, usually the instructor in health education or the instructor in physical education. The staff nurse was found in 55 per cent of the institutions studied, although she functioned solely as a nurse in slightly less than half this number. In the other institutions her duties included instruction as well as nursing.

The health education instructors in the schools studied usually

represented background training in physical education, nursing, or science, with fewer representatives from the fields of nutrition, public health, psychology, medicine, and education. More than one-third of the total number of health education instructors in these schools had the Master's degree. Less than one-third had received the Bachelor's degree. A few, 4.5 per cent, had earned the Doctor's degree in medicine or in philosophy. The remaining instructors had not earned any academic degree.

In some instances met with in the field study, the degree held had not been granted for study in the field of health education nor in related fields. And this condition may be representative of the country as a whole, although no check on this point was made. Hence, the degree held is not necessarily an indication of professional equipment for the work of health education. Furthermore, when the Bachelor's degree has been earned in one field, for example, in education, which does not require detailed training in the sciences basic to health teaching to secure the degree, and the subsequent Master's degree has been awarded for one year's study in the field of health education, it is impossible to expect scholarship in health science worthy of the name of specialization. For advanced work in health education cannot be superimposed on a foundation lacking in all but the one science required in most schools for the Bachelor of Arts degree. Again, the Master's degree in physical education may or may not mean that the possessor is qualified for work in health education, depending on the institution in which the professional preparation of the instructor was received, and whether or not the candidate took specific training in preparation for health education.

Thus it was impossible to evaluate accurately the training of these health education instructors in the teachers colleges. To do this would involve a statement from the educational institutions at which the instructors had studied, giving detailed content of the courses they had pursued, and then a comparative study of the various types of training presented. From the field study it was evident, however, that instructors who had taken graduate work showed a tendency to take some courses fitting them for their work of health education. In most cases health education instructors were carrying heavy teaching loads which would seriously interfere with the further pursuit of scholarship through research and experiment in the field of health education.

CHAPTER VII

HEALTH SERVICE

NECESSITY FOR A HEALTH SERVICE PROGRAM IN THE TEACHERS COLLEGE

IF IT is to survive, and if its students are to gain maximum benefit from their educational experience, the college, whether it is a liberal arts college or one established for distinctly professional purposes, must be interested in, and must make provision for, the health and well-being of its students. This safeguarding and promoting of student health is something apart from health instruction, although closely allied to it. In the administrative scheme of the college this work is usually organized as a unit known as the student health service, already defined in Chapter I. Within recent years the liberal arts colleges and the universities have manifested a growing interest in programs of student health service,¹ despite the report that, in the women's colleges at least, provisions for student health protection and promotion are far from ideal.² The trend is toward more comprehensive and more efficient health service. This is well exemplified in a statement by the President of Columbia University in his annual report for the year 1920:

Columbia has gotten away from the notion that its only responsibility toward its students is to provide them with scholarly instruction. The conception of education which here prevails includes instruction to be sure, but relegates instruction to its proper place in any sound scheme of truly educational endeavor. Mental and physical health, comfortable housing and good food come before either text books or laboratories as educational instrumentalities. The university medical officer and his assistants stand guard over the health of the university, not for the purpose of doing the ordinary work of the physician in treating and curing disease but for the purpose of keeping officers and students in good health, and of preventing the onset of those ailments and illnesses that may by

¹ American Student Health Association, *Proceedings of the Annual Meetings*, 1920-1931.

Forsythe, W. E., "Health Service in American Colleges and Universities," *University of Michigan Bulletin*, Vol. 28, No. 11, 1926.

Sheehy, M. S., *Problems of Student Guidance*, Chap. 7, pp. 185-200. Philadelphia, The Dolphin Press, 1929.

² Beattie, Barbara, "College Girls and College Doctors." *Good Housekeeping*, Vol. XCIII, No. 11, Nov. 1931.

care be so easily prevented. The practical results are extraordinary and can be testified to by hundreds of officers and students. This service is provided by the university without charge and in fulfillment of what it conceives to be a part of its duty towards its members.³

Because the teacher must not only be a healthy human being herself, but must also teach health by example and influence, the need of a student health service program in the professional school for teachers is even more imperative. Studies relative to health and teaching success emphasize this need.⁴ Whitney, reporting a research on teaching success, says:

It is interesting to note that, in the group of three factors which at matriculation determine the probable score in future teaching success, physique is nearly twice as important as secondary record, and intelligence has practically no weight at all.⁵

The fundamental principle that every teacher education institution should provide a program of health service to insure for the schools teachers with health, vitality, and a wholesome outlook on life, has been generally accepted in professional health education organizations ever since the Lake Mohonk Conference on Health Education in 1922.⁶ Succeeding conferences have reiterated their belief in this principle by recommendations and resolutions. So important was the health of the teacher-in-training considered by the Chicago Conference in 1925 that it recommended

that the grading of teacher training institutions should depend not only upon every fulfillment of their scholastic requirement but also upon:

Physical environment standards,

Standards for health examination and follow-up,

Student health as evidenced by an improvement in the standard of student health or living.⁷

Still later, in 1931, the National Conference on College Hygiene, sponsored by the Presidents' Committee of Fifty on College Hygiene,

³ Butler, N. M., "Annual Report of the President, Columbia University," p. 9. *Bulletin of Information*, Columbia University, Dec. 1920.

⁴ Whitney, F. L., *The Prediction of Teaching Success*. Public School Publishing Co., 1924. Knight, F. B., "Qualities Related to Success in Elementary School Teaching." *Journal of Educational Research*, Vol. V, pp. 207-16, March 1922.

Turner, Abby Howe, "College Success and Physical Soundness"; in Nash, J. B., *Interpretations of Physical Education*, pp. 117-32. A. S. Barnes & Co., 1931.

Morris, Elizabeth H., *Personal Traits and Success in Teaching*, pp. 33, 49. Bureau of Publications, Teachers College, Columbia University, 1929.

⁵ Whitney, F. L., *op. cit.*, p. 60.

⁶ American Child Health Association, *Report of The Lake Mohonk Conference*. 1922.

⁷ American Child Health Association, *Report of the Chicago Health Education Conference*, p. 100. 1925.

The National Health Council, and The American Student Health Association, set up an extensive report of requirements for the college health service, some of which would be applicable to the professional school.⁸

Influenced, undoubtedly, by the forward-looking attitude taken in regard to student health by the professional health groups, the teachers colleges themselves have come to accept, in theory at least, this principle relative to adequate student health service. Anent this phase of the school health program, we find The American Association of Teachers Colleges stating, with respect to the standards it expects of institutions applying to it to be accredited, the following requirement:

Provision shall be made by means of suitable organization for the following phases of student health service: (a) physical examinations, (b) consultations on health matters and dispensary treatments, (c) correction of remediable defects, and (d) hospitalization or infirmary care. (This latter type of service may be provided through cooperative arrangements with independent hospitals.) The student health protection services shall be rendered by specially qualified physicians, nurses, dental hygienists, psychiatrists, and others, on such basis, and in such manner as local conditions require. Offices and rooms of the health protection (or service) department or organization shall be equipped with modern scientific apparatus, and provision shall be made for essential clerical services. . . . Facilities shall be provided for indoor and outdoor recreation involving desirable physical activities.

Each teachers college or normal school shall make definite provisions to insure for its students living conditions which provide proper safeguards for health, morals, and mental efficiency.

When dormitories are maintained, these should be of safe construction, shall be kept in wholesome, sanitary conditions, and shall be under responsible supervision.⁹

The real purpose of the institutional health service, however, is not fulfilled merely by meeting requirements, nor by satisfying standards, but by what it does for the students themselves. It should aim to discover opportunities not only for preventive work but also for positive, constructive assistance toward health improvement for all students. For the individual student it should set up an ideal of personal health, and then inspire and aid her to approximate this goal of achievement. At all times the health service program should be, for the student, an educative experience calculated to exemplify in practice the theories

⁸ *Proceedings of the National Conference on College Hygiene*, pp. 13-33. National Tuberculosis Association, 1931.

⁹ American Association of Teachers Colleges, *Yearbook*. 1930.

she is learning in lecture room and laboratory. It should give her by experience an appreciation of what it can accomplish in health protection and health promotion.

How far have these principles been applied in institutions for educating teachers? What phases of the health service program have been generally developed? Which stand in need of more extensive adoption? To answer these questions the institutions under consideration were studied with reference to Standards numbered 10-20 inclusive. The analysis of the data pertinent to this topic follows.

FROM THE FIELD STUDY

Health Entrance Requirements

In all the states where first-hand studies of the teachers colleges and normal schools were made, well-defined entrance requirements relative to health have been prescribed by the state educational authorities. New Jersey, for instance, requires:

A certificate from the medical inspector of the school district in which the applicant's high school is located, or in the case of a transfer, or an applicant holding a teacher's certificate, from a physician showing that the applicant is in good health and free from any physical defects that may unfit him for teaching.¹⁰

Also, we find the following requirement:

At entrance all candidates must be examined by a physician selected by the school to determine whether they are free from any disease or infirmity which would unfit them for teaching; and an examination by this physician may be required of any student, at any time in his course, to determine whether his physical condition warrants his continuance in the school.¹¹

The regulations of the Massachusetts State Department of Education are equally stringent and add to the physical health requirement standards for personality health. Every candidate for admission to a state teachers college in Massachusetts is expected to have:

The principal of the school last attended . . . fill out two blanks—one giving the "Record of High School Work" and the other, a "Rating of Personality Characteristics"—and send them to the principal of the normal school. . . . Health—A candidate must be in good physical condition and free from any disease, infirmity, or other defect that would unfit him for public school teaching. A "Health Record" entered by the family physician on a blank to be furnished by the State Normal School must be presented with the "Record of High School

¹⁰ Trenton State Teachers College, *Catalog*, 1931-1932, p. 22. Trenton, N. J., 1931.

¹¹ *Ibid.*, p. 23.

Work", and, before final admission is granted, the candidate will be given a physical examination by the school physician.¹²

Connecticut, also, includes personality requirements in addition to the physical health standard. Its educational authorities state that the applicant for the teacher education institution must:

Be free from physical defects which would unfit her for the work of a teacher, as reported by the medical examiner.¹³

and

Visit the normal school on the Saturday immediately following the fifth day of June. . . . Personal interviews with members of the normal school staff will be granted.

On the same date each candidate will be given an examination to determine mental alertness.

With the notification of tentative acceptance, the candidate will receive instruction regarding procedure for the physical examination. No applicant is definitely admitted until a favorable report of the medical examiner has been received.¹⁴

In Rhode Island there is but one state institution for the education of classroom teachers, the Rhode Island College of Education. It sets up its own entrance requirement in health, which read as follows:

Good physical health will be expected of all candidates with no serious difficulties of any kind. . . . As admission is on a competitive basis, and the selection is for the good of the schools of the state rather than for personal gain, it is evident that physical and social qualities must be considered as well as the purely mental.¹⁵

The entrance examinations include a general test of scholarship, intelligence, ability, and breadth of information, a silent reading test, and a physical examination by the college physician. . . . The physical examination requires about fifteen minutes for each student.¹⁶

Health Examinations

In keeping with these regulations all the schools visited (100 per cent) required the entrance health examination. Fifty-seven per cent used it as a basis for admission, and debarred from entrance such candidates as did not measure up to its requirements. Five per cent

¹² Framingham Massachusetts State Normal School, *Catalog*, 1931-32, p. 6. Framingham, Mass., 1931.

¹³ New Britain State Normal School, *Catalog*, 1931-1932, p. 36. New Britain, Conn., 1931.

¹⁴ *Ibid.*, p. 38.

¹⁵ Rhode Island College of Education, *Bulletin*, p. 19. Feb. 1930.

¹⁶ *Ibid.*, p. 20.

used the findings on two points—sight and hearing—as a test for admission. Of those that did not debar students because of physical handicaps, 19 per cent admitted them on trial and kept them under observation, with the stipulation that those students who did not respond to this opportunity by health improvement would be eliminated after a reasonable period. The remaining institutions, 19 per cent, did not condition entrance on the findings of the initial health examination.

While there was a tendency toward better appreciation of the mental, emotional, and social factors in the health status of the individual applicant, as well as toward a recognition in theory of the coordinate importance of health status and intelligence and scholastic promise, the use of mental tests and personality examinations at entrance to these schools was very new. Only 10 per cent of the institutions included these factors, along with the physical, in the initial health examination. Another 10 per cent used personnel committees to interview the incoming students. As noted above, Massachusetts required a statement from the high school principal relative to the candidate's personality, and only candidates recommended on this point were accepted in its state teachers colleges. A mental hygiene consultation service or clinic was not found in any of the schools herein reported. One, however, had the part-time services of a psychiatrist, and three others occasionally referred students to near-by psychiatrists. Only one school followed up its initial personality examination with a definite program for personality improvement and better mental hygiene. Its general aim was to send out "teachers who are fit to live with children, as well as to teach them."

It is generally held that the health examination at entrance should be educative in nature as well as exploratory; that its value consists more in discerning health possibilities and indicating methods of attaining these than in merely pointing out defects and weaknesses. However, 90 per cent of the schools visited did not use the entrance health examination period as an educational opportunity. Generally, it was used for the immediate purpose of separating the fit from the unfit. The same percentage of schools, and, incidentally, the same schools, were found (as shown in Chapter VI) to use the services of part-time physicians without specific training in education. This may account for the oversight of the educational potentialities found in the student health examination.

Follow-Up Service

In 52 per cent of these institutions a subsequent follow-up examination was given to encourage health improvement and to check on the correction of defects. The school physician gave the examination in 14 per cent of the institutions. In 38 per cent, the follow-up work was carried on by the health instructor or by the physical education instructor. The remaining 48 per cent provided no subsequent check on health status or for correction of defects. The requirements relative to the latter varied with the institutions studied. Those that required correction exceeded by one, only, the numbers that did not. The percentages are given below:

	Per Cent
Required correction of remediable defects for graduation	52
Encouraged, but did not require	24
Not required, "Generally are corrected"	14
Did not require correction for graduation	10

The desirable feature of provision of regular consultation periods when medical advice would be available to the student, commonly found in the health service of the universities, obtained in only 19 per cent of these institutions studied at first hand. In 24 per cent medical advice was reported as available when the need arose, as in the case of illness. The latter, however, is not the same type of service as the former, which reaches the student while he is still well and endeavoring to ward off illness, or when he is in the incipient stages of disease—real preventive medicine. In 24 per cent of the schools health advice could be obtained from a non-medical staff member of the school health department, and in 52 per cent no health advice was provided by the school. The limitations of this phase of the health service program are self-evident. The frequent headaches, the prevalent use of cathartics and patent medicines, the abnormal amount of periodic disturbance, and the apparent lack of understanding of their individual health needs, found in studies of the health of college women, aside from the disclosures of the health examination, would indicate the need of constructive health advice of a more personal nature than that which can be given in the hygiene class.¹⁷

¹⁷ Stearn, E. W. and Mitchell, G. R., "Important Factors in Directing the Health of the College Woman." *American Journal of Public Health*, Vol. XXI, pp. 984-88, Sept. 1931.

Blunt, K. and Bauer, V., "The Basal Metabolism and Food Consumption of Underweight College Women." *Journal of Home Economics*, Vol. XIV, pp. 171 and 226, 1922.

Student Load

In any program looking to the improvement of student health, the individual student load is an important consideration. The health of the student should invariably be used as a guide in planning and regulating student load, because what is easy for one may be the breaking point for another, due to innate differences in strength and vitality as well as to acquired handicaps and environmental limitations. Again, two students carrying the same school load may have very different daily loads, due to variations in social life, in extra-curricular activities, and in personal responsibilities, such as home help or self-support in whole or part. Sturtevant and Strang found many teachers college students burdened with self-support while they carried full-time school programs.¹⁸ The Sayville Health Education Conference of 1929 listed two uses of the individual student's health status (as revealed by the entrance health examination) first and second, namely: (1) to plan the individual student load; and (2) to regulate her regimen of living.¹⁹ Standard 14 emphasizes the same use of this health information resulting from the individual entrance health examination.

However, in the field study of twenty-one institutions it was found that only 24 per cent based recommendations for subsequent student load upon the student's health status. Ninety per cent of the health instructors interviewed believed that all students in a teachers college or normal school should be able to carry the same prescribed load or they should not be allowed to attend the professional school. It is evident that the doctrine of individual differences generally accepted in educational theory today is not finding 100 per cent application in these teacher education institutions—possibly because it is not in line with the tradition of prescription to which the American normal school has been committed since its inception in 1839.²⁰

On the other hand, 100 per cent of these institutions took into account the individual student's health status in planning her physical education program and in eliminating the unfit from this type of work, generally the latter. This policy, too, is not without its historical background, since one of the earliest uses of the physical examination in the normal schools was to determine fitness for entrance

¹⁸ Sturtevant, S. and Strang, R., *A Personnel Study of Deans of Women*, p. 9. Bureau of Publications, Teachers College, Columbia University, 1929.

¹⁹ American Child Health Association, *School Health Progress*, p. 308. 1929.

²⁰ Class, E. C., *Prescription and Election in Elementary School Teacher Training Curricula*, pp. 82-85. Bureau of Publications, Teachers College, Columbia University, 1931.

into gymnastic classes. This use still prevails²¹ and is occasionally referred to in current catalogs.²²

The student's attitude toward the health service, and her spirit of cooperation in the correction of defects and in achieving health improvement, were considered in recommending the candidate for a position in 33 per cent of these institutions. Twenty-nine per cent recognized these factors in grading their students in personal hygiene courses.

Infirmaries

The majority of the schools studied at first hand (15 schools—60 per cent) were resident schools. Of these fifteen, however, two did not have their own dormitories, and in lieu of these they utilized the local Y.W.C.A. and "recommended" houses. Sixty per cent of these resident schools provided the infirmary suggested in the Standards for isolation purposes. The 40 per cent making no such provision included the two schools lacking their own dormitories.

Regimen of Living

The transition from the old type of scholastic health program made up solely of courses, to the newer, dynamic health curriculum that is concerned more with the student and his health improvement, is best seen in the professional school, perhaps, in the modern provision for a healthful regimen of living, and for healthful surroundings. Sixty-two per cent of these institutions reported engaging in activities which should make for better and more healthful student life, such as the following: studying the student's daily time schedule and teaching her how to budget her day to best advantage; giving Women's Amateur Athletics Association credit to students for the daily practice of health rules; eliminating tea and coffee from the college dining hall; putting the college dining rooms in charge of a person trained in nutrition; providing the student with a faculty counsellor to act as adviser and friend; and providing weekly recreation such as a hike or a swimming party in charge of a faculty member. Three of the day schools were studying, with a view to solution, the problem of outside employment and that of over-long periods of time consumed in commuting to and from the institution.

Where the dean of women was found as a faculty member, other

²¹ Storey, Thomas A., *Status of Hygiene Programs in Institutions of Higher Learning*, p. 52. Stanford University Press, 1927.

²² Trenton State Teachers College, *Catalog 1931-1932*, p. 22. Trenton, N. J., 1931.

conditions having a bearing on student health, especially mental security and poise, received attention. Examples of the dean's contribution on these points were: securing a loan of money needed to correct defects; arranging for a student to earn board and room with a family located near the school, to obviate the need of long distance travel; making arrangements with local specialists for correction of defects where, otherwise, this would be impossible; arranging for the services of a psychiatrist in an individual case. Fifty-two per cent of the schools reported such contributions to the school health program by the dean's office.

Sanitary Inspection of Campus

In 38 per cent of the schools a systematic sanitary inspection of the entire campus was found. But even in these instances the term sanitary inspection was too often limited in its meaning, being used to connote an inspection for cleanliness only. Such items as an adequate supply of hot water at all times in residences to facilitate adequate bathing and laundry facilities, constant room temperatures of 65°-68° F. throughout the campus, adequate cleaning of lavatories and classrooms, attractive as well as sanitary dining rooms, inspection of food handlers, and isolation of students with "common" colds, were found to be ignored in these inspections. Nineteen per cent of the schools reported no sanitary inspection because they were not resident schools. Five per cent inspected buildings on the campus but not those off-campus. Ten per cent did not inspect buildings at the time the interview was held because new buildings were in the process of construction, and the staff were cognizant of the deficiencies of the old, shortly to be abandoned. Twenty-nine per cent reported that in their institutions there was no form of sanitary inspection of the school plant or environment—a regrettable failure to utilize the direct and indirect teaching possibilities of the surroundings as well as to safeguard student health.

FROM THE CORRESPONDENCE INQUIRY

Health Examinations

For the entrance health examination, the figures for the country as a whole were nearly 25 per cent lower than those found in the field study. This situation obtained in all classifications of the schools as well as for the unclassified total. Only 76 per cent of the 144 institutions studied by correspondence required an entrance health

examination. De Weese's study of a sampling of fifty state teachers colleges resulted in the same figures for this topic. Storey, however, found only 54 per cent of the professional schools requiring an entrance health examination. The figures of the present study indicate a 22 per cent gain on this one point since the Storey investigation of 1926.

This entrance health examination was the only examination in 37 per cent of the schools. Thirty-nine per cent also required health examinations at other designated times. Eighteen per cent required such an examination at graduation. Eight per cent required the health examination at entrance and also at graduation. The health instructors interviewed on the field trip considered this a desirable procedure, although none of their own institutions used this plan of examination at both the opening and the close of the course. The reason set forth in favor of it was that the heavy demands made upon the student teacher by her rigid schedule and taxing load often took toll in the form of lessened vitality and depleted energy, if not ill health, as the normal training course progressed. It was their opinion that good health status at the opening of the course, or even at the beginning of the senior year, did not guarantee that at graduation the student would be fit, physically and mentally, to assume the duties of a teacher. The logic of the argument is evident.

An annual examination was required in 38 per cent of the schools answering the inquiry. At the same time, 9 per cent of these schools reported that they did not check on the findings of the entrance health examination. Such a coincidence gives food for thought. It arouses a suspicion that in these instances the annual health examination may be nothing more than a routine procedure and, as such, of little value from the point of view of efficient student health service. In 14 per cent of the institutions no health examination whatever was required. This means that twenty of these schools for educating teachers were sending out into the public schools of the country over 18,000 teachers, by actual count, without investigating their physical or mental fitness for teaching, and without giving them an opportunity to learn by actual school experience the benefits of the school health examination which later they would be called upon to support and explain before questioning, or even skeptical, parents. This finding is not so discouraging as it may seem at first glance, if comparisons are made with Storey's

finding of 44 per cent and with De Weese's of 18 per cent reporting no health examination. The present figures indicate that there has been an appreciable improvement since the De Weese study of recent years and a marked improvement since the investigation by Storey.

Table VI gives the percentages of schools which required health examinations at the various times cited above. The classification is for school enrollments and types of curricula offered. It will be seen that neither the size of the school nor the courses offered affected significantly the frequency or particular times of these health examinations. The general tendency was toward a required health examination at entrance in all sizes and types of schools, although 24 per cent still admitted students without such a requirement.

TABLE VI

PERCENTAGES OF 144 TEACHER EDUCATION INSTITUTIONS REQUIRING HEALTH EXAMINATIONS, 1929-1930

Time at Which Health Examination Is Required	Schools Classified according to Enrollment			Schools Classified according to Curriculum			Unclassified Total
	Under 500	500-999	1000-4500	2-Year	3-Year	4-Year	
	N-66	N-48	N-30	N-29	N-12	N-103	
At entrance.....	76	77	77	69	83	78	76
At entrance only.....	38	25	57	28	50	39	37
Annually.....	39	50	20	45	50	36	38
At graduation.....	20	15	20	21	17	17	18
At entrance and graduation (not annually) ...	6	8	13	7	0	10	8
Annual examination required; no required entrance examination reported.....	9	13	7	10	17	9	9
Health examination not required.....	17	10	17	21	0	15	14

In the field study of twenty-one institutions it will be remembered that the word of the family physician was no longer accepted in lieu of the school doctor's verdict on the health status of an individual student. While in many cases it was required that the family physician recommend the candidate, in no case was the student fully admitted to these twenty-one schools until her health status was finally approved by the school physician. The correspondence in-

TABLE VII

PERCENTAGES OF 144 TEACHER EDUCATION INSTITUTIONS USING DIFFERENT PERSONNEL FOR REQUIRED HEALTH EXAMINATIONS, 1929-1930

Personnel Used	Schools Classified according to Enrollment			Schools Classified according to Curriculum			Unclassified Total
	Under 500	500-999	1000-4500	2-Year	3-Year	4-Year	
	N-66	N-48	N-30	N-29	N-12	N-103	N-144
School physician only...	24	19	30	34	8	22	24
School physician and nurse.....	12	15	..	12	17	10	10
School physician and physical education instructor.....	17	8	7	14	25	10	12
School physician, nurse, and physical education instructor.....	6	21	27	7	9	18	15
Family physician only ..	7	15	3	..	33	9	9
School nurse only	2	4	3	3	..	3	3
Physical education instructor only.....	6	2	7	3	..	6	5
School nurse and physical instructor.....	2	2	..	3	..	1	1
Family physician and physical education instructor.....	2	..	..	..	..	1	1
County physicians and nurses.....	3	..	..	..	..	2	1
State physician.....	2	2	..	3	..	1	1
City health department, physicians and nurses	2	..	..	..	..	1	1
City board of education, physicians and nurses.	..	..	3	1	8	..	1
School physician for women; physical education director for men	..	..	3	..	..	1	1
School nurse for women; local physician for men	..	2	..	..	..	1	1
No health examination required.....	15	10	17	21	..	14	14

quiry showed that this practice did not obtain throughout the country. The school physician and his assistants examined students in 61 per cent of the 144 schools studied by the latter method. And the family physician still had final authority in 9 per cent of these schools. A non-medical health examination or inspection by the nurse or physical education director was the practice in 9 per cent of these institutions. Various other arrangements were made in 7 per

cent of the schools. Table VII indicates the personnel in charge of these health examinations. It will be seen that the size and the type of curriculum did not affect significantly the choice of personnel. About three-fifths of the institutions under each classification employed a school physician. About one-tenth under each grouping gave a non-medical inspection. Very little difference obtained in the percentages of the different classes failing to provide any examination.

Use of the Examination Findings

The results of the health examinations were used for diverse purposes. Table VIII shows the percentage of institutions under each classification and the various uses to which the findings of the health examination were put.

TABLE VIII

PERCENTAGES OF 144 INSTITUTIONS USING THE FINDINGS OF THE INITIAL HEALTH EXAMINATION FOR VARIOUS PURPOSES, 1929-1930

Use of Findings	Classified according to Enrollment			Classified according to Curriculum			Unclassified Total
	Under 500	500-999	1000-4500	2-Year	3-Year	4-Year	
	N-66	N-48	N-30	N-29	N-12	N-103	
As a basis for admission..	70	56	40	59	83	56	60
As one basis for health instruction.....	62	65	60	55	92	61	63
To admit to physical education classes.....	74	79	80	66	92	79	76
To encourage health improvement.....	74	79	80	72	92	77	76
To adjust student's program.....	33	52	57	34	33	49	44
As a basis for admission only.....	5	2	..	3	..	3	3

It will be seen that the findings were used most frequently in all schools to admit students to physical education classes and to encourage health improvement. They were used 16 per cent more frequently for these purposes than to admit to the school itself. The use of the examination as one basis for health instruction in 63 per cent of the schools is a hopeful trend. The fact that less than half the schools used it to adjust student load is in line with the findings of

the field study, and indicates a similar lack of appreciation of individual differences and physical limitations. A larger percentage of the schools with highest enrollment and with four-year curriculum utilized the findings in this individual adjustment of student programs.

The acid test of whether or not the entrance health examination was used as one basis for admission, as indicated above, is the exclusion of students because of its findings. For this reason, the schools filling in the inquiry blank were asked to indicate the number of students excluded because of their health status in September 1929. The returns showed that 37 schools—44 per cent of the 85 indicating such a use of the findings in Table VIII—excluded 133 students because of defects and irremediable handicaps. The range of excluded students was from 1 to 15, with 3 as the mode and 3.6 as the median. This indicates that the physical fitness qualification for entrance was being seriously considered in these schools. Table IX shows the distribution of these excluded students according to the size of the institutions and the types of curricula.

TABLE IX
NUMBER OF STUDENTS DENIED ADMISSION TO 37 TEACHER EDUCATION INSTITUTIONS CLASSIFIED ACCORDING TO ENROLLMENT AND CURRICULUM, SEPTEMBER 1929

	Classification according to Enrollment			Classification according to Curriculum			Unclassified Totals
	39-499	500-999	1000-4500	2-Year	3-Year	4-Year	
Schools excluding students.....	16	13	8	8	4	25	37
Students excluded.....	50	48	35	28	9	96	133

Correction of Defects

The percentage of schools that required correction of defects was found to be less than 50 per cent as high throughout the country as in the block of eastern states investigated in the field trip. Table X indicates the stated times by which defects had to be corrected in the schools that demanded this standard.

It will be seen that only 22 per cent of the institutions required correction of remediable defects for graduation here, while 52 per cent of those investigated in the field study demanded this standard. The

TABLE X

PERCENTAGES OF 144 TEACHER EDUCATION INSTITUTIONS REQUIRING CORRECTION OF REMEDIABLE DEFECTS, 1929-1930

Required Time for Correction	Schools Classified according to Enrollment			Schools Classified according to Curriculum			Unclassified Total
	38-499	500-999	1000-4500	2-Year	3-Year	4-Year	
	N-66	N-48	N-30	N-29	N-12	N-103	
To gain admission	27	21	20	24	42	21	24
To pass health courses . . .	20	21	10	17	42	16	18
To graduate	27	17	17	28	33	18	22
To secure placement	26	15	27	14	33	23	22

percentage of schools meeting all four standards indicated in Table X is noticeably higher for the three-year normal schools, although correction at any one stated time or for any single purpose was not demanded by half these institutions. The total percentage of schools conditioning the passing of health courses on such tangible evidence of the practical application of the instruction as the correction of remediable defects (18 per cent) was strikingly low. A further analysis of the data beyond that indicated in Table X shows that 31 per cent of the institutions that required at least one health examination during the course did not require correction of defects, and 10 per cent of those that gave an annual health examination held to no requirement on this point of correction. These figures as well as that of 22 per cent requiring correction for graduation may indicate that these schools believed that to demand corrections was outside their province, or that the same results might be obtained equally as well by encouragement instead of coercion. The experience of health experts, however, seems to justify the use of the compulsory standard of correction, as seen in Standard 15, page 27. Commenting on the difference between a 46 per cent correction for the more important defects of the public school children of Philadelphia and a 96.3 per cent correction of similar defects for the Philadelphia Normal School students, Rogers says,

The only persuasive factor not existing in the elementary schools is a regulation that all defects must be corrected "if the student is to continue as a teacher-training candidate."²³

²³ Rogers, J. F., "Present Status of School Hygiene." *American Journal of Public Health*, Vol. XVIII, p. 59, Jan. 1928.

The findings in other teacher education institutions employing this standard bear out those from the normal school cited, and point to the achievement of results when such results are expected from all students.

SUMMARY

In this chapter evidence has been presented that, in at least six-sevenths of the 144 teacher education institutions studied, the physical welfare of the students was considered to the extent of giving them a physical health examination at some time during their training course. Three-fourths of the schools required such an examination for entrance, and about one-sixth, for graduation. Nearly two-fifths provided an annual health examination.

The examination was usually a medical examination, slightly over two-thirds of the schools providing this type, although 9 per cent still depended on the non-medical check-up of the nurse or physical educator. Three-fifths of the institutions studied employed temporarily, part time, or full time their own medical staff, and a small number, 7 per cent, used local city and county physicians. The family physician's certificate was accepted in only 9 per cent of the 144 institutions studied. One-seventh of the institutions did not provide any health service in the form of health examinations. These figures are perhaps low rather than high, since the special intensive study of the problem in a group of eastern states yielded much higher figures, especially on the question of entrance health examinations and on that of the employment of a school physician to give the examination, the percentage for both in the field study being 100 per cent.

Much progress has been made within recent years in the adoption of the health examination at entrance to the teacher education institutions. At present it appears to be the best developed phase of the institutional health service program. However, it is not being used to the full extent of its possibilities. The number of schools providing no further check on the health examination and those failing to require correction of remediable defects for graduation indicate a disregard of one of the major objectives for which this examination is given. The absence of any opportunity to obtain medical advice at regular scheduled hours on the campus was found in more than four-fifths of the schools reporting, indicating a regrettable absence of the preventive medicine point of view in the health program of

these schools. Similarly, the general neglect of such vital student health problems as load in relation to physical and mental status, and sanitation on the campus and in off-campus residences, points to a rather narrow conception of health service in terms of examination largely. While some institutions here and there provided for many of these phases, no institution was found where a completely developed health service program meeting all the requirements listed in the Standards of Chapter IV was established.

Of especial significance was the lack of a mental hygiene program, due in some instances to a belief that the needs of the institution did not require it. To deny the existence of mental health problems among the students of normal schools and teachers colleges does not solve the mental hygiene question in these institutions. It merely paves the way for the maladjusted student to become psychotic due to neglect of timely assistance. While this study did not include a consideration of the amount of maladjustment found among these professional school students, there is no valid reason for believing that these students are more highly selected on this point, or more immune to maladjustments, than students of liberal arts colleges, for whom there are ample data to indicate the necessity of a college mental hygiene service. At least some mental hygiene assistance of an individual, personal type should be available to all teachers college students who seek it or need it. And this should be a part of the college health service program, irrespective of whether the specialist who renders the service is a psychiatrist or a psychologist with special training in this work.

CHAPTER VIII

HEALTH EDUCATION

AS SEEN FROM THE FIELD STUDY

FOR purposes of analysis the data on the topic of health education gathered in the field study will be discussed under the three headings used in the list of Standards, namely, Basic Scientific Background, Technical Health Courses, and Professional Subject Matter. (See page 28.) This division does not imply a belief that courses under these headings are essential for the classroom teacher's preparation for school health work. It does signify, however, a basic assumption that content material from all these sources should be included in the teacher's professional training, no matter what the organization of this material may be.

Basic Scientific Background

First to be considered is the classroom teacher's scientific foundation for her school health work. It is generally held that hygiene is applied science—that its subject matter rests upon such basic sciences as chemistry, physics, biology, anatomy, embryology, physiology, bacteriology, etc. Dr. Charles P. Emerson, Dean of the Indiana University School of Medicine, says:

To reach physical hygiene one must work through all these stages (pre-medical and pre-clinical sciences) . . . the greatest enemies of physical hygiene are not those who fight it but the enthusiastic reformers without sufficient training who preach it.¹

It is logical, then, to conclude that the teacher must know the science before she can apply it. A foundation in the basic sciences gives her hygiene knowledge a rational basis. Any other study of hygiene—that is, a superstructure of hygiene without a scientific foundation—can mean only memorized facts. This scientific foundation for her health subject matter is essential whether the teacher teach in the primary grades or at the higher levels. It

¹ Emerson, Charles P., "Mental Hygiene and Its Relation to Public Health." *American Journal of Public Health*, Vol. XV, p. 1065, Dec. 1925.

makes for sound scholarship without which the modern health teacher and the modern health program cannot hope for the respect of the general educator. In health subject matter this thorough foundation and this sound scholarship are essential for the classroom teacher as well as for the specialist, even though, quantitatively, the preparation of each in this field will vary widely. On this point, Bailey says:

Health Education is not a particularly harmless subject on which to loose amateurs. Teaching Latin or spelling or arithmetic with poor preparation and with little skill has no such explosive possibilities as has a subject which attempts to influence the health, sanity and growth of boys and girls.²

The requirement for the classroom teacher's preparatory training in science is set up in Standard 22, page 28. Because the period of professional preparation in the normal school or the teachers college is short, it may be argued that this scientific preparation can be given in the high school. However, the high schools of the country are not providing such scientific preparation at the present time. J. F. Rogers, consultant in Hygiene and specialist in Health Education of the United States Office of Education, says:

Not more than 15 per cent of high school pupils are taught the miracle of their construction and the reason for this is the millstone of College Entrance requirements hung about their necks, or the necks of the principals.³

Billig, surveying the background of scientific information possessed by 954 students in fourteen teacher-training institutions, found that hygiene, physiology, and bacteriology were listed among those studies that had been pursued in high school by 29.35 per cent or less of the students.⁴ She found also that the high school science courses offered for credit by this small percentage of students were predominantly one-half year or one year in length and that, with the exception of eight courses, the science offerings of 146 teacher-training institutions had no prerequisites.⁵ Hence, the student does not have to come to the teachers college with high school sci-

² Bailey, E. W., "Scientific Foundation of the Health Teacher's Professional Training." *Report of the International Health Education Conference at San Francisco*, p. 274. American Child Health Association, 1923.

³ Rogers, J. F., "High Points of the Conference." *Conference on Health Education, Sayville, 1929*, p. 312. American Child Health Association.

See also Judd, Charles H. "Education"; in *Report of the President's Research Committee on Social Trends*. Quoted in *The New York Times*, Jan. 8, 1933.

⁴ Billig, Florence Grace, *A Technique for Developing Content for a Professional Course in Science for Teachers in Elementary Schools*, p. 88. Bureau of Publications, Teachers College, Columbia University, 1930.

⁵ *Ibid.*, p. 90.

ence as a background. Since this is the prevailing status of the science preparation of candidates for teacher education institutions in the biological sciences, it may be said that the high schools cannot be depended upon to supply adequate scientific preparation for the classroom teacher's health courses—at least at the present time. But, even if the high schools did offer further science training to the teachers college candidates, this would not solve the problem of scientific preparation entirely. For “a high school preparation in chemistry and biology is inadequate, not because the ground is not covered, but because of the immaturity of the student. A mastery of scientific subject matter and method is not attained so easily; and stuffing with facts does not meet the need.”⁶ In order to insure the understanding and mastery of its health education offerings, the teacher education institution should provide basic science instruction in its first year course, preferably biology.

What was found relative to this scientific preparation? Five teacher education institutions in one state (24 per cent) gave a course in general science as the only foundation for future health education. Five schools in another state (24 per cent) were changing from a required general science course to one in educational biology, but this latter was not a laboratory course. In another state, four teachers colleges (19 per cent) offered a course in nature study as the preparatory science; three institutions (14 per cent) gave college biology; and two (10 per cent), educational biology. In the fourth state, one teachers college (5 per cent) offered biology, elementary anatomy and physiology, and elementary histology and embryology as required courses. The tendency in these schools, then, was to offer a required course in educational biology, with over one-third of these institutions (34 per cent) listing such a course. Since this was not a laboratory course in any instance, there is some question as to its contribution to the student's understanding of life processes and of the phenomena of living matter as a background for hygiene study. No institution among those studied by personal observation offered the suggested work in chemistry, and none that in bacteriology. However, a study of the class outlines and texts used in these institutions showed that certain units of material belonging definitely in the latter study (e.g., bacteria) were considered under personal and community hygiene. But the very nature of the academic courses offered under hygiene pre-

⁶ Bailey, E. W., *op. cit.*, p. 269.

cluded the laboratory study of those topics that would occur in a recognized course in bacteriology. The three institutions which offered college biology approached more nearly the standard in biology, and the one institution which required several biological sciences, with the exception of its lacking a course in chemistry, probably excelled the standard for basic sciences herein presented. The organization of science offerings in this one institution was due, undoubtedly, to the fact that the instructor was a Doctor of Medicine with more extensive scientific preparation than that presented by the other instructors interviewed. Of these twenty-one institutions, 81 per cent did not even approach the basic science standard.

Technical Health Courses

Turning next to a consideration of the technical health courses, we find that all these schools offered the traditional course in personal hygiene and eighteen (86 per cent) presented it from the point of view of the student-teachers' personal health development as suggested by Standard 23. In one of these schools the health record cards were given to the students following the physician's examination, and this personal record was made the basis of work toward personal health improvement. In two of the schools reporting the use of the student-teacher viewpoint, the health cards were reported as "not used" by the health instructor.

No institution reported a separate course in public hygiene. Twenty-nine per cent (six schools) reported considering public health topics in health courses. Two states (ten schools) gave short courses in school hygiene which treated certain units of material that would be included in a public health course.

So far as classroom teachers were concerned, only one institution visited fulfilled the mental hygiene course requirement of the Standards. This school gave a ten weeks' course in the second and third years under the direction of the visiting teacher, who met the standards of training suggested for a mental hygiene instructor as outlined under "Staff." One school gave a semester course to fourth year students who were said to be preparing for junior and senior high school teaching. This course was given by a recognized psychologist. In both schools the case study method with children was used, and the mental health of the student-teacher herself was also given attention. In 90 per cent of these schools no separate course in mental hygiene was offered, but 19 per cent de-

voted some lectures in the psychology course to the topic of mental health.

No other technical health courses were offered in the schools visited. Where safety education, nutrition, and similar subjects were considered in the professional preparation of the teacher, they were found as topics in general hygiene courses rather than as separate courses.

The Professional Health Education Course

Of all the health education offerings in these twenty-one schools the professional health education course was in the most chaotic condition, and of all it was the least understood. It reflected the traditional growth of teacher-training courses in health education—first, a course in subject matter, and then, an additional course in methods.⁷ For the professional course, fifteen institutions (71 per cent) reported “methods” courses; four (19 per cent) no professional course; two (10 per cent) “school hygiene”; and one (5 per cent) “methods and principles.” This indicates that to the health educator a professional course and a course in methods, or methods and principles, are synonymous. On the other hand, to the specialist in the education of teachers, the professional course is an opportunity to teach methods and classroom applications through especially selected subject matter, and groups of these experts have recommended the professional treatment of subject matter for teachers. One of these says:

The professional treatment of subject matter makes possible the reduction of the number of courses in education, especially those dealing with the special methods of individual subjects.⁸

Randolph in his research study concludes that “as far as possible the distinction between ‘special methods of teaching’ and courses in the subject matter itself should be eliminated.”⁹

Pendleton has said that:

Every subject-matter course (for teachers) should be also a methods course, presenting always the applicability in school of the various materials dealt with.¹⁰

And again:

There is no such thing as methods detached from content.¹¹

⁷ American Child Health Association, *Some Tendencies in Health Education*, p. 15, 1926.

⁸ The Survey Commission, “Louisiana Survey.” *Report of the Survey Commission*, pp. 120-22.

⁹ Randolph, E. G., *The Professional Treatment of Subject Matter*, p. 393. Warwick & York, 1924.

¹⁰ Pendleton, C. S., “The Content and Method of Subject-Matter Courses in Teachers Colleges.” *Addresses and Proceedings of the National Education Association*, Vol. 64, p. 862, 1926.

¹¹ *Ibid.*, p. 861.

The health educators interviewed in this study had not adopted this ideal of eliminating courses in methods and securing the same objective through a professional treatment of their subject.

Content of the Professional Course

Some important elements of content for the professional course have been set up in Standards 29–48, inclusive. The following summary indicates how far these Standards for such a course were met. The consideration of the whole health program and of the teacher's contribution to it suggested in Standard 29 was an important element of the course in 86 per cent of the institutions studied on the field trip. The remaining institutions did not consider it formally in the course.

As indicated in Chapter I, the health program duties of the classroom teacher have in recent years increased, especially in the field of health service. Standards 30 and 31 point to the necessity for specific training for cooperation in the health service program, and for giving the "screening" inspection when necessary. Of the schools visited, 95 per cent reported that they did not give student-teachers this specific training for cooperation in the school health service program, and none of the schools provided training in normal health diagnosis—the recognition of departures from health in individual pupils. The control of communicable diseases, however, was studied from texts, state bulletins, special mimeographed materials, etc., in all schools. The prevailing practice and the recommendations of The White House Conference on Child Health and Protection on this question of training for teacher cooperation in the health service program vary widely. In the reports of this Committee we find that forty-eight experienced physicians in twenty-five states agreed that:

The training of all teachers for the detection of signs of communicable disease and of gross physical defects should be a requirement of the law.¹²

And the entire Sub-Committee on Medical Service in Schools in the White House Conference went on record that:

The teacher is a foster parent on a large scale and the keener the eyes and ears of that parent for signs of defects or health disturbance, if she reports her observations promptly to the medical inspector or nurse, the better off her family will be. One physician remarks that the ability of the teacher in this field "is the keystone of medical inspection."¹³

¹² White House Conference on Child Health and Protection, *The School Health Program*, p. 388. The Century Co., 1932.

¹³ *Ibid.*, p. 388.

If the professional school for teachers is to meet the needs of the practitioner with regard to her cooperation in the health service program, there is need for the introduction or for the fuller development of such pre-service training as will meet this requirement in the professional health course.

The techniques for giving tests of vision and hearing, and training in sight conservation were given in 57 per cent of these institutions, the majority of the institutions being in a state requiring teachers to administer such tests to their pupils.

How to follow up the correction of remediable defects (Standard 33) and the modes of exclusion and readmission (34) were considered in only one school visited (5 per cent). The low percentage considering this training necessary was conditioned, probably, by the large number of school nurses or cooperating visiting nurses in the area studied at first hand. Likewise, the comparatively small amount of rural territory in these states would account for the absence of such a need, since urban communities rather generally provide school nursing service.

One of the simplest and most effective means by which the teacher can control the spread of communicable disease is through the daily morning health inspection. Today this is generally accepted as a useful and necessary procedure in school health work.¹⁴ Fifty-seven per cent of the schools visited gave training in the technique of the morning health inspection. One instructor did not believe in its use, and another did not think teachers capable of giving it. (See footnote 12, page 73.) Hence this technique was not taught in these two schools. In addition, 33 $\frac{1}{3}$ per cent of the schools reported that it was not taught but gave no explanation for this omission. Thirty-eight per cent of these schools gave training in the recognition of suspicious signs of communicable disease and 71 per cent taught the facts of, and the underlying reasons for, immunization of school children.

The facts presented thus far relative to the professional course point to the need (in these institutions) for more specific and more inclusive training in health service procedures for the classroom teacher, in order that she may be able to assume her rightful and strategic position in the school health service program as the first line of defense in safeguarding the pupil's health.

¹⁴ White House Conference on Child Health and Protection, *The School Health Program*, p. 85.
Wood, T. D. and Rowell, H. G., *Health Supervision and Medical Inspection of Schools*, p. 101. W. B. Saunders Co., 1927.

The preparation for classroom nutrition teaching in these schools was not very extensive. Only one institution provided a special course in nutrition, but twenty included some nutrition subject matter in their courses in personal hygiene. An examination of the texts used in the personal hygiene classes of these twenty institutions showed a very elementary treatment of the subject of nutrition, without any consideration of the application of this knowledge to classroom teaching situations. The preparation for nutrition teaching given in these institutions did not differ from that which might be given a student in the hygiene course of a liberal arts college for her own personal well-being. The preparation was not "professional."

Safety education was considered a topic of instruction in professional health education courses in 67 per cent of these institutions; hygiene of the environment (sanitation) in 95 per cent; and hygiene of instruction (i.e., all but the fixed environment) in 14 per cent of the schools visited.

Only 19 per cent of these institutions trained their students in methods of making an objective analysis of situations in the child's life that would yield pertinent health problems. The same percentage of schools reported giving training in the use of behavior scales. These are two techniques which would free the teacher from slavish dependence upon courses of study and texts, and which would give her the creative viewpoint in her work of health instruction as well as assist her in utilizing the potentialities of the specific situations in which she would find herself. Less than half the schools, 48 per cent, treated all phases of health in their instruction courses. The social and mental phases were those most frequently neglected in the remaining 52 per cent.

Habit formation was given as a specific element of the professional course in 86 per cent of the institutions. Thirty-eight per cent of the schools stressed basic principles to the exclusion of devices, and 29 per cent furnished the students with sound criteria for evaluating health education material, thus giving them standards to guide them in the ever-changing health education situations they will be called upon to face in their teaching careers.

Nowhere in the entire school program is home cooperation more necessary than in health education. Despite this recognized fact, only one school provided definite preparation for home-school cooperation as suggested in Standard 48. The absence of specific training for this objective may indicate the assumption that the abil-

ity to secure such cooperation can be gained through the after-school experience of the teacher-in-service. There is no factual evidence, however, to show that this is so, and expert group thought points to the need of pre-service preparation as a more efficient method of attaining this goal.

Sequence of Courses

A typical sequence of the courses embodying this content just indicated was: a first-year course in personal hygiene, a second-year course in school hygiene, and a third-year course in methods. Even where state outlines were followed, the content of the courses varied with the instructors.

Since no standard relative to the time requirement or the credit hours for health education had been set up, this topic was not investigated in the field trip. Its omission was deliberate because it is the belief of the writer that the number of clock hours or credit points devoted to health instruction is not necessarily an indication of the effectiveness of the health education program. It is interesting at this point, however, to note the time allotment considered adequate for this subject by the teachers college experts in the state of Massachusetts (nearly one-half of the schools investigated were located in this state), where, in the spring of 1932, the normal schools became teachers colleges with a consequent reorganization of their professional curricula. Under the new curricula outlined in 1932, health education is included under physical education and the combined courses are given 5.9 per cent of the total semester hours credit, or 9.7 per cent of the total clock hours credit for the entire four-year course. Of this total, health education receives the following:

Physical Education II: Personal and Community Hygiene, 36 weeks, First Year, 2 semester hours, 1 clock hour; Physical Education VI: School Health Education, 18 weeks, Third Year, 1 semester hour, 1 clock hour.

These figures, as such, indicate no correlation between the theoretical importance assigned to the health objective of education and the amount of time devoted to health education.

From the field study it will be seen that the health education program in these twenty-one teacher education institutions is weakest in its lack of provision for adequate scientific background and for a thoroughly professional health education course. In the course content there is need of practical training to fit the teacher for co-

operating in the health service program, for understanding the mental and social phases of child health as well as the physical, and for handling reliably new teaching situations in the school health program. A reorganization of courses with a better professional selection of content would allow for enrichment of the health education course without further time allotment than that now assigned to this work. Such selection should be based on careful research as to the teacher's needs in health education subject matter.

FROM THE CORRESPONDENCE INQUIRY

Check List of Course Offerings

In order to secure, through the correspondence study, a more detailed and carefully delineated picture of the content of technical and professional health courses in the teacher education institutions throughout the country, a detailed list of the major topics ordinarily considered in such courses was sent out to be checked by instructors. These topics were derived from two research studies dealing with health problems and from an analysis of five frequently used texts as well as from state outlines for health courses. Instructors were asked to check the items taught, whether or not they were taught in a required or an elective course, and, finally, the names of the courses in which they were taught. The returns on these 74 topics from the 144 cooperating institutions were classified twice: (1) for schools of different enrollment classifications; and (2) for schools offering different curricula.¹⁵ Table XI pictures the topics offered in the health courses of these schools classified under six headings which do not necessarily represent titles of courses. For example, the topic "Hygiene of eating," which appears under the classification of Personal Hygiene, means that this is a topic of personal hygiene taught in a total of 112 schools. However, in half these schools it may have been taught in a course in nutrition or in one entitled health education, but not, necessarily, in a personal hygiene course. Table XI gives findings on topic offerings for schools of various enrollments.

Elements of Health Education Subject Matter Most Frequently Taught

From Table XI it will be seen that the topics of personal hygiene were those most frequently taught, although none of the topics was

¹⁵ Tabulations for this second classification—according to curricula—may be found in the manuscript of this study filed in the Teachers College Library, Columbia University.

5. Measurement of nutritional status of children.....	11	17	18	38	4	13	33	23	14	21	11	23	16	53	41	28
6. Use of reports of nutrition research.....	10	15	12	25	5	17	27	19	12	18	12	25	14	47	38	26
7. Nutrition work with children	14	21	18	38	3	10	35	24	10	15	10	21	18	60	38	26
III. Public Health or Community Hygiene																
1. Longevity and life extension..	21	32	23	48	9	30	53	37	4	6	6	13	11	37	21	15
2. Major causes of death.....	24	36	25	52	13	43	62	43	3	5	7	15	9	30	19	13
3. Major causes of illnesses.....	24	36	26	54	15	50	65	45	4	6	8	17	9	30	21	15
4. Economic and social phases of illness.....	20	30	23	48	11	37	54	38	4	6	9	19	10	33	23	16
5. History and development of public health work.....	23	35	16	33	9	30	48	33	3	5	6	13	9	30	18	13
6. Bacteriology.....	13	20	11	23	6	20	30	21	3	5	12	25	21	70	36	25
7. Germ theory of disease.....	34	52	29	60	16	53	79	55	8	12	9	19	11	37	28	19
8. Sources and modes of infection	39	59	28	58	16	53	83	58	8	12	11	23	12	40	31	22
9. Prevention and control of communicable disease.....	43	65	31	65	17	57	91	63	6	9	9	19	10	33	25	17
10. Prevention of degenerative diseases.....	28	42	25	52	14	47	67	47	6	9	5	10	7	23	18	13
11. Prevention of organic diseases	25	38	27	56	12	40	64	44	6	9	6	13	7	23	19	13
12. Prevention of dietary deficiency diseases.....	32	48	25	52	17	57	74	51	7	11	5	10	9	30	21	15
13. Specific measures for disease prevention.....	44	67	31	65	17	57	92	64	8	12	6	13	8	27	22	15
14. Health heroes: Pasteur, etc...	35	53	28	58	13	43	76	53	7	11	5	10	7	23	19	13
15. Sewage and garbage disposal	33	50	27	56	15	50	75	52	5	8	6	13	8	27	19	13
16. Public health administration: National, state, municipal....	26	39	21	44	9	30	56	39	5	8	5	10	11	37	21	15
17. Community health agencies: Dispensaries, clinics, public health nurse associations, laboratories.....	30	45	23	48	7	23	60	42	5	8	6	13	11	37	22	15
18. Voluntary health organizations.....	18	27	20	42	8	27	46	32	3	5	5	10	10	33	18	13
19. County and rural health work	21	32	19	40	7	23	47	33	5	8	6	13	11	37	22	15

2. Defects and diseases of school children.....	44	67	29	60	12	40	85	59	6	9	9	19	11	37	26	18
3. How to detect deviations from normal health in children.....	36	55	28	58	12	40	76	53	9	14	8	17	11	37	28	19
4. How to give tests of vision and hearing.....	37	56	25	52	15	50	77	53	7	11	10	21	10	33	27	19
5. Aims and scope of school health work.....	39	59	28	58	15	50	82	57	6	9	7	15	11	37	24	17
6. School health supervision and follow-up.....	32	48	24	50	12	40	68	47	6	9	7	15	10	33	23	16
7. Special classes: Open air, etc....	20	30	16	33	7	23	43	30	2	3	4	8	8	27	14	10
8. Health of teachers.....	34	52	25	52	13	43	72	50	3	5	4	8	9	30	16	11
9. Hygiene of instruction (including mental hygiene).....	29	44	22	46	16	53	67	47	5	8	5	10	7	23	17	12
10. Sources and selection of health teaching materials.....	33	50	27	56	13	43	73	51	7	11	7	15	8	27	22	15
11. Methods of teaching health....	37	56	26	54	13	43	76	53	6	9	9	19	7	23	22	15
12. Correlated and incidental health training.....	34	52	25	52	11	37	70	49	6	9	9	19	9	30	24	17
13. Psychology applied to health training.....	30	45	24	50	7	23	61	42	5	8	7	15	9	30	21	15
14. Educational principles applied to health teaching.....	30	45	27	56	10	33	67	47	5	8	5	10	8	27	18	13
15. Devices for health teaching....	32	48	28	58	12	40	72	50	8	12	6	13	8	27	22	15
16. Unit planning.....	27	41	24	50	11	37	62	43	7	11	6	13	7	23	20	14
17. Tests and measurements of classroom health work.....	19	29	23	48	10	33	52	36	5	8	4	8	5	17	14	10
18. The present status of school health work in U. S.....	20	30	22	46	7	23	49	34	4	6	6	13	8	27	18	13
19. Status of school health work in other countries.....	3	5	11	23	4	13	18	13	1	2	5	10	4	13	10	7
20. The development and use of a health education course of study.....	16	24	20	42	9	30	45	31	3	5	6	13	7	23	16	11
VI. Miscellaneous Topics																
1. Anatomy.....	19	29	14	29	3	10	36	25	7	11	18	38	19	63	44	31
2. Physiology.....	29	44	21	44	6	20	56	39	9	14	16	33	18	60	43	30

taught in all the schools that reported. Likewise, the topics of personal hygiene were least frequently found in elective courses.

None of the topics of nutrition was taught in a required course in even one-half the schools reporting, although practically all the nutrition topics were taught in elective courses in half, or more than half, the schools of largest enrollment, indicating that the teachers colleges with highest enrollment most frequently offered elective courses with content in the nutrition field. "Nutrition work with children," an important professional item, was taught in but about one-third of the schools which reported giving any kind of nutrition training.

The public health topics show a wide range of frequency, varying from disease prevention and communicable disease control, taught in more than three-fifths of the schools, to bacteriology and industrial hygiene, offered in but one-fifth of these institutions. The economic, social, and historical phases of community health problems and national, state, and municipal endeavors for community health—topics which have direct bearing upon the professional aspects of the classroom teacher's health work—were taught in only one-third to two-fifths of the schools reporting. From one-fifth to one-third of these institutions offered all the topics of public health in elective courses, and seven-tenths of them offered elective work in bacteriology. Again, the percentage of schools offering these electives was higher for the schools with highest enrollment.

None of the topics of racial hygiene was taught in half these institutions, although the topic of heredity was offered in 45 per cent of them. Social hygiene was found in slightly more than two-fifths of the number.

Very few of the elements of health education were found in more than half the institutions. These few were: defects and diseases of school children, aims and scope of school health work, health of teachers, sources of health education materials, methods of teaching health education, and devices. Less than one-third taught the use of the health course of study.

Anatomy was required in one-fourth of these institutions and physiology in slightly less than two-fifths of the number. Both were elective in nearly one-third of these schools.

Neither the size nor the curricula offerings of these institutions seemed to condition the frequency with which course elements were offered as required work. However, all health education topics not

offered as required work were most frequently offered as electives in the largest institutions and in those with a four-year curriculum.

Items taught in half these institutions, irrespective of classification, were those of personal hygiene and the following: germ theory of disease, sources and modes of infection, prevention and control of communicable diseases, prevention of dietary deficiency diseases, specific measures for disease prevention, health heroes, sewage and garbage disposal, building sanitation, community food, milk, and water supplies, defects and diseases of school children, tests of vision and hearing, aims and scope of school health work, health of teachers, sources of materials, teaching methods, and devices. Those conspicuous by their absence included items making up the subject matter of nutrition, the social and civic phases of public health, the health machinery of various governmental units, the subject matter of racial hygiene, child growth and development, the procedures for the teacher's cooperation in the school health service, planning of health units, use of tests and measurements, principles of health education, and the use of the course of study.

Course Distribution of Health Education Subject Matter

It is significant to note the wide distribution of courses in which the items of professional and technical subject matter were found. Table XII indicates that the elements of Personal Hygiene were distributed through 55 different courses in the 144 institutions reporting. Personal hygiene topics were found most frequently in the following courses: personal hygiene, physical education, hygiene, health education, psychology, physiology, physiology and hygiene, and mental hygiene. These personal hygiene items were likewise found in such courses as tests and measurements, clothing, and industrial arts.

As Table XIII shows, community hygiene topics were distributed through 93 separate course titles, those found most frequently being: hygiene, health education, physical education, bacteriology, biology, personal hygiene, physiology, community hygiene, first aid, school hygiene, and home economics.

Courses in history, civics, family relations, eugenics, kindergarten theory, parental education, school techniques, sociology, and technic in sports were likewise contributing to the students' training in matters of community health. It is to be noted that in only four instances were the courses dealing with community health topics called by the title "Public health" or "Public school hygiene."

The principles and facts of nutrition were not so widely scattered, being found under only 49 course titles. Health education, home economics, nutrition, chemistry, hygiene, school hygiene, personal hygiene, and dietetics were the courses found most frequently to supply nutrition training, as is seen in Table XIV.

Health education material was found in 73 different courses. Courses most frequently discussing topics under this classification were: health education, hygiene, physical education, psychology,

TABLE XII

DISTRIBUTION OF THE SUBJECT MATTER OF PERSONAL HYGIENE IN COURSES OFFERED BY 144 TEACHER-TRAINING INSTITUTIONS, 1929-1930

Course Title	No. of Schools	Course Title	No. of Schools
Abnormal psychology.....	1	Hygiene and public health...	1
Anatomy.....	1	Hygiene and sanitation.....	6
Anatomy and physiology....	1	Individual hygiene.....	1
Bacteriology.....	1	Industrial arts.....	1
Biology.....	3	Mental hygiene.....	8
Character education.....	1	Mental and social hygiene...	1
Child development.....	1	Methods in health education	1
Child hygiene.....	1	Methods in physical education	1
Clothing courses.....	2	Methods and materials for ele-	
Corrective gymnastics.....	1	mentary schools.....	1
Diseases and defects of children	1	Nursing and first aid.....	1
Educational hygiene.....	1	Nutrition.....	3
First aid.....	1	Personal guidance.....	1
Foods and nutrition.....	1	Personal hygiene.....	35
Freshman hygiene.....	2	Personal and school hygiene..	2
Health.....	5	Physical education.....	29
Health education.....	19	Physiology.....	10
Health education for teachers	1	Physiology and hygiene.....	9
Health essentials.....	1	Physiology, hygiene, and sani-	
Health habits.....	2	tation.....	1
Health and hygiene.....	5	Preventive medicine.....	1
Health and hygiene in ele-		Principles of health education.	1
mentary schools.....	1	Principles of physical educa-	
Health training and instruc-		tion and health.....	1
tion.....	1	Psychology.....	13
Home economics.....	7	Public health.....	1
Home nursing.....	2	Public school hygiene.....	1
Hygiene.....	19	School hygiene.....	7
Hygiene of the school child..	2	Social psychology.....	1
Hygiene and physical educa-		Tests and measurements.....	1
tion.....	1		

TABLE XIII

DISTRIBUTION OF THE SUBJECT MATTER OF COMMUNITY HYGIENE OR PUBLIC HEALTH IN COURSES OFFERED BY 144 TEACHER-TRAINING INSTITUTIONS, 1929-1930

Course Title	No. of Schools	Course Title	No. of Schools
Administration of physical education.....	2	Health training and instruction.....	1
Anatomy and physiology.....	1	History.....	1
Architectural drawing.....	1	Home and community hygiene	2
Bacteriology.....	24	Home economics.....	11
Biology.....	21	Home hygiene.....	1
Child care.....	5	Home management.....	1
Child growth and development	2	Home nursing.....	2
Child health.....	1	Home sanitation.....	1
Child hygiene.....	1	Hygiene.....	40
Civics.....	1	Hygiene and physical development of the child.....	1
Community civics.....	1	Hygiene and physical education.....	1
Community health.....	1	Hygiene and sanitation.....	6
Community hygiene.....	13	Hygiene of the pre-school child.....	1
Community recreation.....	2	Hygiene of the school child...	1
Diagnosis and therapy.....	1	Kindergarten theory.....	3
Dietetics.....	1	Mental hygiene.....	2
Diseases and defects of children.....	1	Microbiology.....	1
Domestic science.....	1	Methods courses.....	8
Economics.....	2	Nature, function, and organization of play.....	1
Educational biology.....	1	Nutrition.....	4
Educational hygiene.....	2	Parental education.....	1
Education of pre-school children.....	1	Personal hygiene.....	21
Epidemiology.....	1	Physical diagnosis.....	1
Eugenics.....	1	Physical education.....	25
Family relations.....	1	Physical education methods..	2
First aid.....	16	Physical education theory...	1
Foods.....	1	Physical education for elementary schools.....	1
Food chemistry.....	2	Physiology.....	16
Foods and nutrition.....	1	Plays and games.....	2
Freshman hygiene.....	1	Playground and community recreations.....	1
Games, dances, athletics and sports.....	1	Playground supervision.....	2
General science.....	3	Prevention of diseases.....	1
Health.....	2	Preventive medicine.....	1
Health and hygiene.....	7	Public health.....	6
Health and safety education..	1	Public health education.....	2
Health education.....	26	Public health and personal health.....	1
Health education for schools..	1	Public school hygiene.....	2
Health essentials.....	1		
Health in rural schools.....	1		
Health problems of the grade teacher.....	1		

TABLE XIII—*Continued*

Course Title	No. of Schools	Course Title	No. of Schools
Rural education.....	1	Science essentials.....	1
Rural sociology.....	2	Sex hygiene.....	1
Sanitation.....	8	Social hygiene.....	2
School administration.....	1	Social science.....	1
School hygiene.....	12	Sociology.....	7
School management.....	2	Supervised play.....	1
School techniques.....	1	Teachers' course in health...	1
Science.....	3	Technic in sports.....	1

TABLE XIV

DISTRIBUTION OF THE PROFESSIONAL SUBJECT MATTER OF NUTRITION IN COURSES OFFERED BY 144 TEACHER-TRAINING INSTITUTIONS, 1929-1930

Course Title	No. of Schools	Course Title	No. of Schools
Anatomy and physiology....	1	Home economics.....	19
Biology.....	2	Home service.....	1
Chemistry.....	14	Hygiene.....	15
Child care.....	1	Hygiene of the school child...	1
Child development.....	1	Hygiene and physical develop- ment of the child.....	1
Child health.....	1	Hygiene and physical educa- tion.....	1
Child hygiene.....	1	Hygiene and sanitation.....	2
Dietetics.....	5	Meal planning.....	2
Dietetics and nutrition.....	2	Methods of teaching health education.....	1
Diseases and defects of chil- dren.....	1	Nutrition.....	18
Domestic science.....	1	Nutrition and health.....	1
Educational hygiene.....	1	Nutrition of the school child..	1
Foods.....	4	Organic chemistry.....	1
Food chemistry.....	2	Parental education.....	1
Foods and cookery.....	1	Personal hygiene.....	5
Foods and nutrition.....	4	Personal and school hygiene..	1
Food selection.....	1	Practical arts.....	1
Food selection and prepara- tion.....	2	Principles of physiology and health.....	1
Growth and development of children.....	1	Physiology.....	4
Health.....	2	Physiology and hygiene.....	4
Health education.....	19	Public health.....	1
Health education for schools..	1	School health.....	1
Health essentials.....	1	School hygiene.....	8
Health and hygiene.....	3	Science.....	1
Health training and instruc- tion.....	1		

TABLE XV

DISTRIBUTION OF THE SUBJECT MATTER OF HEALTH EDUCATION IN COURSES
OFFERED BY 144 TEACHER-TRAINING INSTITUTIONS, 1929-1930

Course Title	No. of Schools	Course Title	No. of Schools
Activities, games, stunts, and health education	1	Individual hygiene	1
Adolescent psychology	2	Introduction to education . . .	1
Anatomy and physiology	1	Materials and methods of physical education	1
Biology	1	Medical gymnastics	1
Child care	8	Mental hygiene	5
Child development	3	Mental and social hygiene . . .	1
Child hygiene	4	Methods in physical education	5
Child psychology	5	Normal diagnosis	2
Child study	1	Nursing	1
Classroom health procedures	1	Nutrition	5
Community hygiene	1	Opportunity course	1
Diseases and defects of chil- dren	1	Pedagogy	1
Education	4	Personal hygiene	13
Educational hygiene	1	Physical diagnosis	2
Educational measurements . . .	2	Physical education	14
Educational techniques	2	Physiology	2
First aid	1	Preventive medicine	1
Growth and development of children	7	Principles of education	2
Health	2	Principles of health and physi- cal education	1
Health and hygiene	7	Principles of teaching	4
Health and sanitation	1	Principles and problems in health education	1
Health education	35	Problems of health in elemen- tary schools	1
Health habits	1	Psychology	14
Health instruction	1	Psychology of secondary edu- cation	1
Health methods	10	Public health	2
Health problems of the grade teacher	1	Public school hygiene	2
Health science	1	Rural hygiene	1
Health supervision	1	School health	2
Health training and instruc- tion	1	School hygiene	12
History and principles of edu- cation	1	School hygiene and sanitation	2
Home economics	5	School and community hy- giene	2
Home nursing	1	School techniques	1
Hygiene	22	Science	2
Hygiene and physical educa- tion	1	Teachers' course in health . . .	1
Hygiene and sanitation	3	Teaching of health and physi- cal education in elementary grades	1
Hygiene of instruction	1	Tests and measurements	3
Hygiene of the school child . .	3		

school hygiene, child care, growth and development of children, health methods, and personal hygiene.

Table XV shows that health education topics were frequently found in such general education courses as: education, educational techniques, history and principles of education, introduction to education, pedagogy, principles of education, principles of teaching, and school techniques. This finding gives rise to such questions as whether or not "health education methods" courses are duplicating this material and whether it can be handled more effectively in a special methods course than in the general education courses.

Forty-three different courses made a contribution to racial hygiene, but it was treated most frequently in courses labelled: health education, biology, hygiene, eugenics, educational biology, heredity, sociology, and psychology. Table XVI indicates the range of courses containing material from the field of racial hygiene.

TABLE XVI

DISTRIBUTION OF THE SUBJECT MATTER OF RACIAL HYGIENE IN COURSES OFFERED
IN 144 TEACHER-TRAINING INSTITUTIONS, 1929-1930

Course Title	No. of Schools	Course Title	No. of Schools
Anatomy and physiology	1	Home nursing and child care	3
Biology	11	Hygiene	11
Child care	4	Hygiene and physical develop-	
Child hygiene	2	ment of children	1
Diseases and defects of chil-		Hygiene and sanitation	1
dren	1	Mental hygiene	2
Economics	1	Nature study	1
Education of pre-school chil-		Nutrition	3
dren	1	Personal hygiene	11
Educational biology	7	Physiology	3
Educational hygiene	1	Preventive medicine	1
Educational psychology	1	Principles of physical educa-	
Eugenics	9	tion and health	1
Evolution	2	Psychology	5
Genetics	3	Public school hygiene	1
Genetic psychology	1	School hygiene	2
Health	3	School hygiene and health	
Health education	15	education	3
Health and hygiene	1	Science	3
Health training and instruc-		Social hygiene	3
tion	1	Social psychology	1
Heredity	6	Sociology	6
Home economics	4	Teaching of health	1
Home management	1	The adolescent age	1
Home nursing	4		

Anatomy and physiology, while more frequently given as courses in themselves than as parts of other courses, were not always found as course entities. Table XVII shows the range of courses in which some of the elements of anatomy and physiology were considered.

TABLE XVII

DISTRIBUTION OF THE SUBJECT MATTER OF ANATOMY AND PHYSIOLOGY IN COURSES OFFERED IN 144 TEACHER-TRAINING INSTITUTIONS, 1929-1930

Course Title	No. of Schools	Course Title	No. of Schools
Anatomy.....	47	Hygiene and physical education.....	2
Applied anatomy.....	2	Personal hygiene.....	2
Applied physiology.....	1	Personal and school hygiene	1
Biology.....	7	Physical education.....	4
Body mechanics.....	1	Physiology.....	62
Child hygiene.....	1	Physiology and hygiene.....	2
Educational biology.....	1	Physical examination and nor-	
Educational psychology.....	1	mal diagnosis.....	1
Health education.....	8	Science.....	1
Home economics.....	1	Zoology.....	1
Hygiene.....	3		

As Table XVII indicates, the content material from anatomy and physiology was found in 20 courses. Aside from courses labelled "Anatomy" or "Physiology" this material was most often found in courses entitled health education and biology.

The tabulations presented in this chapter indicate the scattered distribution of basic, technical, and professional material concerned with the school health program. As seen from the tables, course titles do not always indicate course content, and this condition may point to the fact that these courses have their place in the professional school because of academic tradition rather than because of professional needs. A reorganization of the subject matter found to be of professional use, into one or two professional courses, would eliminate the numerous overlapping courses purporting to contribute to the health education of teachers. And it would prevent duplication of material which must exist under the present traditional arrangement of courses planned logically rather than psychologically or professionally.

SUMMARY

The data presented in this chapter point to a much needed development of the classroom teacher's scientific background for her

health education. Her technical health training was chiefly in the field of personal hygiene with some work in community hygiene. There was a noticeable lack of adequate preparation in nutrition, mental hygiene, and racial hygiene. The professional courses varied in content and treatment, dealing largely with methods and procedures rather than with the application of methods to subject matter selected from the professional point of view. Data were presented to show that the subject matter of health education was distributed over a range of 49 to 93 courses, with much duplication. A study of a classified list of health education elements showed that some elements considered most useful professionally were not taught in half the institutions reporting, while some less useful were considered in a large majority of the schools. Course titles gave no definite knowledge of course content. A better selection of professionally useful material and a better organization of this material into fewer courses would give the classroom teacher a richer and more adequate preparation for her school health work than the present outworn traditional set-up of courses. By such a reorganization of the content of health education subject matter courses, the teachers college can not only offer the equivalent of academic college offerings in hygiene, but also add to them a great deal of professional content distinctively its own.

CHAPTER IX

OBSERVATION AND PRACTICE

AS SEEN IN THE FIELD STUDY

SPECIALISTS in the professional preparation of teachers hold that the campus demonstration or practice school is the heart of the teacher's curriculum;¹ that from there the student's training should emanate, and about it her class work and her pursuit of individual teaching problems should center. In order to achieve the distinctive purpose of the professional school, the laboratory school is as necessary to the teachers college as the clinic and hospital are to the medical school. But full benefit cannot be derived from such a school unless the teacher-to-be can see exemplified, and can try out under supervision, typical phases of the teaching responsibility that she is preparing to assume. This is particularly important in training for service in the school health program where techniques and procedures other than those involved in the imparting of knowledge are employed. Standard 50, page 31, lists a number of such techniques to be acquired through student-teacher participation in the health program of the campus elementary school.

The Campus Demonstration School

Fifteen of the 21 schools studied at first hand had campus demonstration schools. The remainder had off-campus schools of this type, or they used the city schools. In all, 16 schools used by these institutions for purposes of demonstration or observation had an organized health service program; nine had established programs of health education; and none claimed any special training for the school health program on the part of their instructors in practice (critic teachers), although the director of practice connected with one such school had taken special health education training at a university giving training in this field. These data indicate a weakness at the very center of the teachers college health program, where

¹ Alexander, T., Bagley, W. C., Evenden, E. S., and Stratemeyer, F., Major Course lecture notes. Teachers College, Columbia University, New York, 1929-1930.

the program should be as nearly exemplary as is humanly possible. All these professional institutions offered preparation for health education, yet only nine, less than 50 per cent, demonstrated in their elementary schools a workable program of health education that might be observed and studied as a practical application of classroom theory. No amount of classroom teaching or college lecture work on the importance of the school health program will prove effective if the professional institution does not consider such a program of sufficient importance or value to establish it in its own demonstration school. Its very absence acts as a denial of classroom theory. Moreover, there is much that can best be taught, relative to the school health program, by actual demonstration rather than by lecture; e.g., the daily morning health inspection for signs of deviations from normal health. This opportunity for efficient teaching of such techniques does not offer, particularly in cases where no school health program has been established in the campus elementary school.

Practice in the School Health Program

Ten schools, nearly 50 per cent, reported that their students did not have an opportunity to gain practice in any of the techniques or procedures suggested in Standard 50. The preparation for school health responsibilities was wholly theoretical in these schools. Six schools, 29 per cent, reported that, when their students went out for practice teaching, they taught anything that was taught in the school to which they were assigned. In other words, any practice in the school health program that these students received was purely accidental, so far as the teachers college was concerned. The college did not assist in planning this practice, nor in supervising it. Again, since no check was kept by the teachers colleges, it may have been the exception rather than the rule, in these schools, to have the students obtain any practice whatever in the activities of the school health program. Four institutions, 19 per cent, planned and supervised the practice of their students in this work. This practice usually took the form of health instruction, although three schools reported practice in such health service activities as the morning health inspection. Only one school reported practice in home-school cooperation, and this was limited to practice in addressing the parent-teacher association.

College Cooperation in the Campus Elementary School Health Program

Both Standards 49 and 50 suggest an integration of the campus demonstration school health program with the college health courses, and both standards call for close cooperation of the college health education instructor and the instructors of practice in the integrated health programs of both schools. However, in actual practice, as determined by the field study, this ideal situation did not obtain in all the schools visited. In one instance the college instructor supervised the entire college health program and also the complete health program in the demonstration school. In another, the college health education instructor supervised and cooperated closely in the demonstration school health education program. In a third, the college instructor supervised the demonstration school health service program. In the remaining schools, 86 per cent, the cooperation between the college staff and the elementary school staff, in this field of endeavor, could not be called close. Where the campus elementary school health program had been established, it existed as something apart, and not as a laboratory in constant use by the college health department for observation, demonstration, and practice. That the possibility of cooperation between both schools would not be impractical in the specific institutions under consideration was seen from the arrangement which prevailed relative to physical education. In this activity very close cooperation between the college and the elementary school existed in practically every institution having such a school on or off the campus, and, in most instances, the college instructor was the elementary school supervisor of physical education. Practically all schools visited also reported that their students gained practice in physical education.

The field study points to the need of a new emphasis on the importance of the training or demonstration school as the center of the student-teacher's education for the school health program. If the demonstration school is "the heart of the teacher's curriculum," the student's training in health education should begin there in the problems, the needs, and the situations found in this actual teaching set-up. This is the reverse of the order now used in these teacher education institutions. With this newer approach, the classroom discussions, readings, and researches will be an outgrowth of a real situation, presenting a real problem calling for solution, rather than just teacher assignments that must inevitably be done to secure a passing grade. Once a tentative solution of the problem presented

has been arrived at through college group discussion, the elementary training school again becomes the proving ground for testing out the conclusions, providing a college laboratory in the truest sense of the term. Such an arrangement will bring into greater play the contributions of the instructors in practice in the training school, who are specialists in child training, to supplement the work of the college instructor, who is usually a specialist in subject matter.

FROM THE CORRESPONDENCE INQUIRY

Observation of School Health Work

The correspondence study indicates a better outlook for the problem of observation and participation in the school health program. As Table XVIII shows, more than two-thirds of the 144 institutions reporting required observation in the following: health examinations, health teaching, health inspections, and weighing and measuring. More than half of these institutions, 56 per cent, required observation of all four activities. There is little significant difference in the practice of the various classifications of schools on this item.

TABLE XVIII

PERCENTAGES OF 144 COOPERATING TEACHER EDUCATION INSTITUTIONS REQUIRING VARIOUS TYPES OF OBSERVATION IN THE SCHOOL HEALTH PROGRAM, 1929-1930

Kinds of Observation	Schools Classified according to Enrollment			Schools Classified according to Curricula			Unclassified Totals
	Under 500	500-999	1000-4500	2-Year	3-Year	4-Year	
	N-66	N-48	N-30	N-29	N-12	N-103	N-144
Health examinations	65	67	73	55	58	72	67
Health inspections	66	77	63	72	75	71	72
Health teaching	80	79	73	79	92	77	78
Weighing and measuring .	79	81	77	72	75	82	79

Participation in the School Health Program

Table XIX illustrates the amount of practice in school health activities required in these institutions. It will be seen that the percentage of schools requiring practice is very much lower on every point than that for observation. Half the schools, or more, required practice on these five items only: vision and hearing tests, health in-

spection, health instruction, weighing and measuring, and leading games. Less than one-third gave any practice in cooperation in the health service program, or in such practical methods of acquiring, at first hand, a knowledge of the hygiene of the environment, as making campus and community health surveys. Less than half gave practical experience in meal planning. The practice program is weakest in the same places where the health education program indicated a need for further development, namely, in training for health service, for nutrition teaching, and for the community aspects of health education. Although the schools throughout the country showed a tendency to a greater use of the training school as the center of the school health program than the schools observed on the field trip, there is need here, also, of more extended observation and practice in this field for all students.

TABLE XIX

PERCENTAGES OF 144 COOPERATING TEACHER EDUCATION INSTITUTIONS REQUIRING PARTICIPATION IN SCHOOL HEALTH PROGRAM ACTIVITIES, 1929-1930

Activities in Which Students Participate	Schools Classified according to Enrollment			Schools Classified according to Curricula			Unclassified Totals
	Under 500	500-999	1000-4500	2-Year	3-Year	4-Year	
	N-66	N-48	N-30	N-29	N-12	N-103	N-144
Vision and hearing tests.	61	75	73	62	58	71	68
Health inspections.....	67	77	67	69	83	69	70
Weighing and measuring.	76	85	73	76	67	81	78
Follow-up service.....	29	40	27	24	50	32	31
Special studies of individual children.....	41	56	43	31	50	50	47
Health instruction.....	77	69	67	76	83	70	72
Leading clubs and games	50	52	57	62	67	48	52
Cafeteria supervision ...	30	40	13	24	17	33	30
Meal planning.....	35	52	40	34	33	45	42
Sanitary surveys.....	17	25	27	14	25	23	22
Community health surveys.....	18	29	40	17	33	28	26

SUMMARY

Both the field study and the correspondence study point to a need for closer cooperation between the college health education department and the campus training school. As shown in this study, the average campus demonstration or training school did not have a

well-developed school health program. This situation will tend to weaken the force of—if not contradict—the college instruction relative to the prime importance of the school health program. It likewise tends to militate, and in these instances did militate, against the use of the campus elementary school for health education demonstration purposes.

Data relative to the students' observation and practice indicated that, so far as the school health program was concerned, a double track system existed in which both the college and the elementary school all too often carried out their own health programs, where these existed, without much interchange of assistance or service. The demonstration school, generally, was not made the center of the school health program from which the college class took its problems, procedures, and techniques. The college health education instructor, in most instances, was not the health education supervisor or director in the demonstration schools having school health programs.

The amount of observation provided in the school health program was limited. Practice was usually accidental and rarely supervised by the college health education instructor. It was never marked as a separate element in practice teaching in the institutions studied.

The data presented indicate the need of integrating the demonstration school health program with the health education program of the teachers college. A cooperative arrangement whereby the college instructor directs, or at least assists in planning, the instruction program of the elementary school, and the instructor or supervisor of practice in the demonstration school contributes to the professional health education course, would make for better integration of the whole institutional health program. The college instructor in health education should arrange for both observation and participation in the school health program and should follow up the students' achievements in the latter.

CHAPTER X

GENERAL SUMMARY AND RECOMMENDATIONS

THE present study had a threefold purpose: To set up standards for teacher training in the school health program; to investigate present practice in this field in the professional schools for elementary teachers throughout the United States; and to evaluate existing practices in school health programs in these institutions. By a first-hand study of the school health programs in twenty-one normal schools and teachers colleges located in four Eastern states, supplemented by a correspondence study of 144 such institutions scattered throughout the country, present practice in school health procedures for classroom teachers was determined. A set of standards covering the main divisions of the teacher-training health program was prepared from the best available published group findings and resolutions on this phase of the teacher's curriculum. These standards were used as criteria of what the teacher's health program should be in the critical analysis of present methods of training teachers for the school health program. And in the absence of research findings on these points, these standards were held to be the best objective test of the achievements and lacks of the teachers college health program.

PRESENT STATUS OF TEACHER-TRAINING SCHOOL HEALTH PROGRAMS

The data presented in this study showed that, with reference to their school health programs, the teachers colleges and normal schools had made noticeable progress during the last decade. At the time of making this study the initial health examination was required in more than three-fourths of the institutions studied; an annual health examination was required in more than one-third of the total number; and six-sevenths of the total number required an examination at some time during the course. One-seventh still did not give or require a health examination at any time during the course. There had been a general trend away from acceptance of the family physician's rating of the candidate's health status toward a general health examination and rating by the school physician. Three-

fifths of these teacher-training institutions conditioned entrance to the school on the health rating of the candidate, although a larger number, three-fourths, used the findings of the health examination to determine the student's fitness for the program of physical education activities. Practice, with reference to the correction of remediable defects, was still far from standard and needed readjustment. Less than one-fourth of the teacher-training institutions studied required correction of remediable defects for graduation and for placement. The staff engaged in the health service program, in general, lacked the special qualifications in the field of education called for by the standards in addition to their specific professional qualifications. Mental and social qualifications and achievements of students were not generally considered in the health service program.

Health education was found in all the institutions studied, but courses to meet this need varied widely in title as well as in content. The basic scientific background for these courses fell far short of the standard. The personal hygiene course for the students themselves was practically universal. This was usually followed by courses in school hygiene and in health education, listed under various titles. An examination of the content of these courses showed that material of professional significance was omitted. Of special importance were the omissions in material dealing with health inspections, nutrition, mental hygiene, and social hygiene. There is evident need of research to determine the teacher's needs in health education, and, perhaps, of reorganization of course offerings in the light of the findings.

Instructors engaged in health education were found to represent a variety of kinds and degrees of background training and experience for their work. Frequently the degree held was not taken in the field of health education or allied subjects, and therefore did not signify qualification for this special work.

The most neglected phase of the professional health program for teachers was that which dealt with the observation and participation of the student-teacher in the school health program of the campus elementary school. For the most efficient functioning of the college health education program it was evident that closer cooperation between the college staff in this field and the instructors in practice in the demonstration and practice schools must be achieved. Present practice showed that the majority of teacher-training institutions did not make provisions for specific observation and practice in health

education. More often the student's participation in the school health program was accidental rather than planned. As a result, her health education training was largely confined to college class work, and the potentialities of the elementary school as a source of health education problems and as a proving ground for health education theories were neglected.

From the administrative point of view these institutions generally lacked adequate integration of their school health programs and specific unification under one staff member delegated to act as the director of the program. As a result, health education was often thought of in terms of an entrance health examination and health education course rather than as a school policy and as a major objective of the whole teachers college course. Two-fifths of the schools studied had established faculty health committees as a means of unifying their programs and of stimulating interest in student health.

NEEDED RESEARCH

The present study represents a contribution to definite knowledge of the present status of professional health programs for teachers and their evaluation by objective standards to be reached in such teacher-training programs in health education. However, there are certain recognized limitations to the study which await further research to establish the needed facts. One of the most pressing problems calling for solution is that relative to the content of teachers' courses in preparation for the school health program. No standard on this point has been included. So far as published materials indicate, none of the courses now being offered for teachers in health education, and none of the texts now being used in such courses, are based on research which has revealed the teacher's peculiar needs in preparation for the school health program. Both courses and texts for teachers have been based on individual teachers' and authors' opinions and not on teachers' needs. To solve this problem a functional or job analysis of the teacher's work in the school health program is necessary, and should be made before the teacher's needs here can be stated definitely.

Further research and experiments should be made to determine the best organization of these activities and materials (as determined by needs) into courses.

Basic to the determination of materials for teachers' courses is the solution of the problem of what knowledge and training in this field

are necessary for the child. The content of health education for children at various grade levels is still in the realm of opinion. There is evident need for research on the problem of grade placement as determined by children's interests and children's needs.

Other studies needed to throw light on this problem of teacher education for the school health program are those concerned with:

The types of training that produce the most effective health education teacher in the elementary school.

Tests and tools for measuring effective health education in elementary schools.

The types of instruction for the school health program which should be given during the pre-service period of preparation and those which can best be given during the period of service.

The organization of the professional health education course.

The best sequence of health education courses in the professional school.

Experimental determination of the amount and kinds of practice in the school health program.

In addition to these problems, there are many others concerned with the school health program at the elementary school level that have a direct bearing on the teacher's education and that should be solved in the best scientific manner. All these will affect, at least indirectly, the content of teachers' courses. But no effort to establish facts relative to the important points in the teacher's training in this field which will give her preparation a scientific foundation should be spared. For it is to the classroom teacher that the average child must look first for health protection and for health education during the period of the school day. And while the school administrator determines whether or not there shall be a school health program, once it has been established it is to the classroom teacher that we must look for its success in affecting the lives of boys and girls. As the teacher, so the school. Hence, the Joint Committee in their report *Health Education* have termed the teacher's education in health "the most vital and urgent problem" in carrying out the entire school health program. Can we afford, then, not to make more adequate provision for the health education of classroom teachers?

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APPENDIX

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NORMAL SCHOOLS AND TEACHERS COLLEGES COOPERATING IN THE CORRESPONDENCE INQUIRY

Alabama	Normal	Marquette
Daphne	Indiana	Ypsilanti
Normal	Indianapolis	Minnesota
Troy	Muncie	Bemidji
Arizona	Terre Haute	Moorhead
Flagstaff	Iowa	Winona
Tempe	Cedar Falls	Mississippi
Arkansas	Kansas	Cleveland
Pine Bluff	Emporia	Missouri
California	Hays	Harris-St. Louis
Arcato	Pittsburg	Cape Girardeau
Chico	Kentucky	Kansas City
Fresno	Bowling Green	Kirksville
Santa Barbara	Murray	Springfield
San Diego	Richmond	Warrensburg
San Francisco	Louisiana	Montana
San Jose	Nachitoches	Billings
Colorado	Scotlandville	Dillon
Greeley	Maine	Nebraska
Connecticut	Farmington	Chadron
*Danbury	Fort Kent	Kearney
*New Britain	Maryland	Peru
*New Haven	Bowie	Wayne
Delaware	Frostburg	Nevada
State University—	Towson	Reno—State
Newark	Massachusetts	University
Georgia	Boston	New Hampshire
Athens	*Bridgewater	Keene
Collegeboro	*Fitchburg	Plymouth
Valdosta	*Framingham	New Jersey
Idaho	*Lowell	*Newark
Lewiston	*North Adams	*Paterson
Illinois	*Salem	*Trenton
Carbondale	*Westfield	New Mexico
Chicago	*Worcester	East Las Vegas
De Kalb	Michigan	Silver City
Evanston	Detroit	New York
Macomb	Kalamazoo	Albany

* Schools studied also by personal visit.

Brockport	Edinboro	Washington
Fredonia	Indiana	Bellingham
Jamaica	McKeesport	Cheyney
New Paltz	Millersville	Ellensburg
New York City	Philadelphia	West Virginia
Oneonta	Pittsburgh-Frick	Bluefield
Oswego	Shippensburg	Huntington
Plattsburg	Slippery Rock	Shepherdstown
North Carolina	South Dakota	West Liberty
Cullowhee	Aberdeen	Wisconsin
Elizabeth City	Madison	La Crosse
North Dakota	Spearfish	Menomonie
Ellendale	Tennessee	Oshkosh
Minot	Johnson City	Platteville
Ohio	Memphis	Wyoming
Cleveland	Nashville	State University-
Columbus	Texas	Laramie
Dayton	Commerce	Washington, D. C.
Kent	Denton	Wilson Teachers
Oklahoma	Huntsville	College
Ada	Nacogdoches	Connecticut
Durant	Utah	†Bridgeport
Edmond	State University-	†Willimantic
Tahlequah	Salt Lake City	Massachusetts
Oregon	Virginia	†Hyannis
Ashland	East Radford	New Jersey
Monmouth	Fredericksburg	†Glassboro
Pennsylvania	Petersburg	†Jersey City
Bloomsburg	Vermont	Rhode Island
Clarion	Castleton	†Rhode Island College
East Stroudsburg		of Education

† Schools studied only by personal visit.

CHECK LIST

USED IN THE CORRESPONDENCE INQUIRY

WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION
COMMITTEE ON THE SCHOOL CHILD

SUB-COMMITTEE ON PROFESSIONAL TRAINING OF TEACHERS AND LEADERS
Chairman: WILLIAM C. BAGLEY, PH.D.
Professor of Education, Teachers College, Columbia University

The Sub-committee on the Professional Training of Teachers and Leaders of the Committee on The School Child in the White House Conference on Child Health and Protection is making a study of the preparation of teachers for their responsibilities in school health programs. Your Institution has been chosen as one we wish to include in our study. Will you kindly cooperate by asking your director of health education, or other interested faculty member, to fill in the attached blank, and return to Dr. Thomas D. Wood, 525 West 120th Street, New York City, in the attached envelope, by March 15, 1930.

TEACHER TRAINING FOR HEALTH EDUCATION

Name of School	Location
Total enrollment: (Exclusive of summer session and extension students.)	
Male	Female
Number of students admitted in September, 1929.	

Health Service

Is a health examination required of every student:

At entrance	Annually	For graduation
By whom given: School physician School nurse		
Physical education director		
Family physician		
Is a record of this on file?		

What use is made of findings of this examination:

YES NO

As one factor for admission?
As a basis for health instruction?
As a basis for physical education?
To encourage improvement in student health?
To adjust student's program?

Number of students denied admission in September, 1929, because of physical defects:

YES NO

Must defects be corrected in order to

Enter the institution
Pass health or hygiene courses
Graduate
Secure Placement

Staff

Health Education Instructor: Degrees: R.N. B.S. B.A. M.S. M.A.
Ph.D. M.D.

Previous experience:

Physician Nurse Grade teacher Biology teacher
Science teacher Physical education teacher
Home economics teacher
List courses she teaches

Physician: Educational as well as medical training?

YES NO

Full-time staff member?

Part-time?

Nurse: Training: R.N. B.S. M.A.

Duties: Health supervision

Health teaching

List courses she teaches, if any

List other staff members engaged in health work, giving degrees and duties
Remarks:

Faculty Health Committee

Does the school have a faculty health committee? If so, who is chairman?

Health Education Director Principal

Physical Education Director Others

Check the following who are members of the committee:

Director of Physical Education Principal of Institution

Physician Nurse Dean of Women Dietitian

Instructors in Home Economics Department Number

Instructors in Physical Education Number

Instructors in Biology Department Number

Instructors in Psychology Instructors in Health or Hygiene

Principal of Demonstration or Practice School

Other Members, list

What are the duties of this committee?

To supervise living conditions for students

To plan student load

To pass on daily régime

To plan health program of school

To integrate and coordinate all phases of school health program

To conduct research in phases of school health program

To promote personal health of students

To receive reports on matters concerning student health and act on these

To secure changes which will make for better student health

To supervise extra-curricular activities

Housing

Number of students living in school dormitories

At home

In boarding houses

Does school set up health standards for boarding houses?

With reference to which factors:

Nutrition Service

Is there a dietitian in charge of college dining hall?

College cafeteria?

Health Education

Note: Below you will find a list of health topics often given in teachers' health courses. Kindly check column marked "Required," if this health item or problem is given in a required course taken by all students preparing for elementary school teaching. If the topic is taught, but not in a required course, check the column marked "Elective." Under "Course" give the name of the course where the topic is taught. Three examples are given. If the topic is taught in two courses check twice as in number three.

	Not Given	Re- quired	Elec- tive	Course in Which Topic is Given
PERSONAL HYGIENE				
Personal cleanliness				
Oral hygiene				
Hygiene of eating				
Hygiene of work				
Foot care				
Posture				
Elimination of body waste				
Hygiene of special senses				
Clothing in relation to health				
"Minor ailments": headaches, colds, etc.				
Mental hygiene				
Periodic health examinations				
NUTRITION				
Food needs at various age levels				
Planning menus and diets for individual needs				
Signs of good nutrition				
Chemistry of foods				
Measurement of nutritional status of children				
Use of reports of nutrition research				
Nutrition work with children				

	Not Given	Re- quired	Elec- tive	Course in Which Topic is Given
PUBLIC HEALTH OR COMMUNITY HYGIENE				
Longevity and life extension				
Major causes of death				
Major causes of illnesses				
Economic and social phases of illness				
History and development of pub- lic health work				
Bacteriology				
Germ theory of disease				
Sources and modes of infection				
Prevention and control of com- municable disease				
Prevention of degenerative dis- eases				
Prevention of organic diseases				
Prevention of dietary deficiency diseases				
Specific measures for disease pre- vention: ex. vaccination, toxin antitoxin, etc.				
Health heroes: ex. Pasteur, Lis- ter, Gorgas, etc.				
Sewage and garbage disposal				
Public health administration, na- tional, state, municipal				
Community health agencies; dis- pensaries, clinics, public health nurses' associations, labora- tories				
Voluntary health organizations				
County and rural health work				
Organized recreation				
Health superstitions				
Nostrums, quackery, and patent medicines				
Industrial hygiene				
Accident prevention and care				
Building sanitation (ventilation, lighting, heating, cleanliness)				
Community food, milk, and water supplies				
Interpretation of health statistics (vital statistics)				
Pre-school health work				

	Not Given	Re- quired	Elec- tive	Course in Which Topic is Given
PUBLIC HEALTH OR COMMUNITY HYGIENE— <i>Cont.</i>				
Adult health education				
RACIAL HYGIENE				
Heredity in relation to health				
Eugenics				
Social hygiene				
Problems of infant and maternal hygiene				
HEALTH EDUCATION				
Child growth and development				
Defects and diseases of school chil- dren				
How to detect deviations from normal health in children				
How to give tests of vision and hearing				
Aims and scope of school health work				
School health supervision and fol- low-up				
Special classes: open air, sight conservation, opportunity, etc.				
Health of teachers				
Hygiene of instruction (including mental hygiene)				
Sources and selection of health teaching materials				
Methods of teaching health				
Correlated and incidental health teaching				
Psychology applied to health teaching				
Educational principles applied to health teaching				
Devices for health teaching				
Unit planning				
Tests and measurements of class- room health work				
The present status of school health work in the U. S.				
Status of school health work in other countries				
The development and use of a health education course of study				

	Not Given	Re- quired	Elec- tive	Course in Which Topic is Given
MISCELLANEOUS TOPICS				
Anatomy				
Physiology				
LIST OTHER TOPICS				

Laboratory Practice
(Observation and Participation)

YES NO

Are opportunities offered for student observation of:

 Health examinations in training school

 Health inspections

 Health teaching

 Weighing and measuring

Are opportunities offered for student participation:

 In vision and hearing tests

 In health inspections

 In weighing and measuring

 In follow-up work of medical supervision

 In making special health studies of individual children in training
 school

 In health teaching

 In leading children's excursions or clubs

 In dining room or cafeteria supervision of children

 In menu planning

 In dormitory or school sanitary surveys

 In community health surveys

List other forms of observation or participation.

VITA

MARY ELISABETH SPENCER was born at Malden, Massachusetts, November 10, 1902. Her elementary and secondary education was received in private schools. Her college and professional work was taken in the various schools of Columbia University from which she received the degrees of B.A. in 1922 and M.A. in 1923. Subsequent post-graduate work in psychology and psychiatry was taken at the Catholic University of America, the Johns Hopkins University, Boston University, and Harvard University. A special study of public health centers and "new schools" in nine European countries was made in 1929.

She has held the following professional positions:

Director of the Bureau of Health Education, The National Catholic Welfare Conference, Washington, D.C., 1923-1929.

Professor of Public Health, The National School of Social Service, 1928-1929.

Secretary, Committee on the Professional Education of Teachers, The White House Conference on Child Health and Protection, 1929-1930.

Cousens Fund Professor and Head of the Department of Health Education, Marygrove College, Detroit, Michigan; and Professor of Education, St. Mary's Normal School, Monroe, Michigan, 1930-1931.

Instructor in the summer sessions of the following institutions: The Catholic University of America, 1926 and 1933; Notre Dame University, 1927; Marygrove College, 1931; Columbia College, Dubuque, Iowa, 1932.

Previous publications include: *Health Through the School Days*, 1924. *Health Education Bibliography for Teachers*, 1925. *Foods and Nutrition*, 1926. *Obstacles to Character Development*, 1929. *Your Child's Problems*, 1933. Contributions to reports of the World Federation of Education Associations and the American Child Health Association. She is a member of Kappa Delta Pi and was the holder of the first A. C. H. A. Fellowship in Health Education.

